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WALKER, FRANCIS
INSECTA BRITANNICA:
DIPTERA
VOL. III 1856

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INSECTA BRITANNICA.

DIPTERA.

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INSECTA BRITANNICA.

DIPTERA.

VOL. III.

BY

FRANCIS WALKER, F.L.S.

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PREFACE.

It was originally contemplated to give a complete enumeration, with descriptions, of the British Diptera in three volumes, of which the present is the last, and a general Introduction was promised therewith. But, as has been already explained in the Preface to the second volume, the matter was found so much more extensive than had been calculated, that it became necessary to omit a large proportion of the recorded British species, and many of the genera in the vast Family *Muscidæ*. It would require a fourth volume to develope the work with the degree of completeness originally proposed; and as there is now a prospect that the Publisher may be encouraged to offer such a supplementary volume by Mr. Haliday, it has been thought better to reserve the general view and illustrations of the Order for the conclusion, and thereby to give more space for the treatment of the Families remaining for the present volume, and for additions to the plates, and to the text, illustrative of those treated of in the preceding two. A complete enumeration of the known British species not described in these three volumes would have occupied more space than could be spared for the purpose. The additions therefore have been limited to a notice of the genera omitted, including the reasons for the exclusion of some few that appear

in the previous lists of British DIPTERA. It has not been thought necessary to enumerate the genera which Macquart and Desvoidy have formed as dismemberments of those of Meigen, nor yet certain others, the representatives of which will be found included in the greater genera from which they were taken, as the collective index of generic names and synonyms will direct the student to these, and the complete Systematic Index is reserved for the Supplement. As the sheets up to the end of the index to this volume have been printed off several months since, it was not practicable to incorporate the first list of Errata. The Addenda and Corrigenda, and the general observations, have been kindly prepared by Mr. Haliday; and Mr. Westwood has supplied two supplementary plates of generic illustrations instead of two drawn by Mr. Haliday, to illustrate the venation of the wings and the nomenclature adopted for the veins and areolets, which also will find a place in the Supplement.

FRANCIS WALKER.

February, 1856.

The reader is requested to bear in mind that the Analytic Tables, whether of families, genera, or species, are intended to apply only to the British species described in these volumes, and that a more extended application of them would be liable to lead into error in several instances. The change of plan, adopted at the very conclusion of the present volume, having caused the Errata to be dispersed in several lists, it is recommended carefully to note all the corrections from these in the text.

A. H. H.

EXPLANATION OF THE CONTRACTIONS IN THE REFERENCES.

A. N. H.—Annals of Natural History.

A. S. N.—Annales des Sciences Naturelles.

Act. Holm.—Kongliga Svenska Vetenskaps Akademiens Handlingar, Stockholm.

Agas. *or* Agass.—Agassiz, Nomenclator Zoologicus.

Ann. Soc. Ent. Fr.—Annales de la Société Entomologique de France.

(Bigot.)—*See* Ann. Soc. Ent. Fr.

Bilb.—Billberg, *see* Zett.

Blanch.—Blanchard, Histoire Naturelle des Insectes, etc.; Histoire des Insectes.

(Bouché,) Nat.; Nov. Act. Acad. Cæs. — Naturgeschichte der Insekten; Acta Nova Academiæ L. C. Naturæ Curiosorum.

(Bremi,) Beitr. neue Denkschrift.—Mémoires Nouveaux de la Société Helvétique des Sciences Naturelles, Neufchatel.

(Brullé.)—Expédition Scientifique de la Morée.

Burm. — Burmeister, Handbuch der Zoologie.

Curt. or Ct. B. E. *or* Brit. Ent.—Curtis, British Entomology.

D. B.—Insecta Britannica, Diptera.

D. G. *or* Deg., Ins.—Degeer, Mémoires pour servir à l'histoire des Insectes.

Dahlb.—Dahlbohm, Kort Underrättelser om Skandinaviska Insekters, o. s. v.

Denkschr. Schw. Ges. Naturw.—Mémoires Nouveaux de la Société Helvétique des Sciences Naturelles, Neufchatel.

Desv.—Desvoidy (Robineau), Essai sur les Myodaires.

Donov.—Donovan, British Insects.

Dumr.—Duméril, Zoologie Analytique.

E. M. *or* Ent. Mag.—Entomological Magazine, London, 1833–1838.

E. Z. *or* Ent. Zeit.—Entomologische Zeitung, herausgegeben von dem Entomologischen Vereine zu Stettin.

F. *or* Fb. E. S.; E. Suppl. *or* Suppl.; Mant. Ins.; S. A. *or* Syst. Antl.; Sp. I. *or* Sp. Ins.—Fabricius (J. C.), Entomologia Systematica emendata et aucta; Entomologiæ Systematicæ Supplementum; Mantissa Insectorum; Systema Antliatorum; Species Insectorum.

Fall. *or* Fln.—Fallen, Diptera Sueciæ; Specimen Entomologicum, etc.

(Fries,) Monogr. Simul.; Mon. Tan. — Monographia Simuliarum Sueciæ; Monographia Tanypodum Sueciæ.

Geoff. *or* Geoffr. H. N. Ins.—Geoffroy, Histoire Abrégée des Insectes qui se trouvent aux environs de Paris.

Germ. *or* Grm. mag.—Germar, Magazin für Insektenkunde.

Gim. *or* Gimm. *or* Gmtl., Bull. Mosq. —Gimmerthal, Bulletin de la Société Impériale des Naturalistes de Moskau.

Gmel.—Gmelin, Linnæi Systema Naturæ, editio xiii-ma aucta, etc.

Guér.—Guérin-Méneville.

Hal.—Haliday.

Hammersch.—Hammerschmidt.

(Hardy,) Scot. Gard.—Scottish Gardener.

(Hartig,) Jahresberichte.—Förstliche J.

Hoffm.—Hofmansegg, *see* Meig.

Illig. Mag.—Illiger's Magazin für Insektenkunde.

Ins. Brit. Dipt.—Insecta Britannica, Diptera (the present work).

Kalt.—Kaltenbach.

Kby. Linn. Trans.—Kirby, Transactions of the Linnæan Society of London.

Kl. Zw.—(Meigen) Klassification und Beschreibung der Europäischen Zweyflügligen Insekten.

Kong. Vet. Acad. Handl.—Kongliga Svenska Vetenskaps Akademiens Handlingar, Stockholm.

Lam.—Lamarck, Animaux sans Vertèbres.

Latr. Dict. H. N.; G. C. *or* Gen. Cr. *or* Gen. Curt.; H. N. Cr. et Ins. *or* Hist. Nat. Ins.—Latreille, Dictionnaire Nouveau d'Histoire Naturelle; Genera Crustaceorum et Insectorum; Histoire Naturelle Générale et Partieulière des Crustacées et des Insectes.

Lea.—Leach, Edinburgh Encyclopædia. *See also* Sam.

Lehm. Diss.—Lehmann, Acta Nova Physico-medica Academiæ L. C. Naturæ-Curiosorum, Bonn.

Léon Duf.—Léon Dufour.

(Loew,) *or* Lw. Pr. Pos. Gymn.—Dipterologische Beyträge, 4ter Theil, Posen.

L. F. S. *or* Faun. Suec. *or* Fn. Sc. *or* Fn. Suec.; S. N.—Linnæi Fauna Suecica; Systema Naturæ. (N.B. The edition, not the volume, is referred to by the Roman numerals.)

Mcq. *or* Mq. D. N. *or* D. N. F. *or* D. N. F. Tip. *or* Tip. N. F.; D. *or* H. N. D.—Macquart, Diptères du Nord de France Tipulaires; Histoire Naturelle des Insectes Diptères, Paris, 1834, 1835.

Meig. *or* Mg. Kl. *or* Kl. D. *or* Kl. Zw. *or* Klass.; Zw.—Meigen, Klassification u. Beschr. d. Eur. Zweyfl. Ins.; Systematische Beschreibung der bekannten Europäischen Zweyflügligen Insekten.

Meg.—Megerle, *see* Meig.

Müll. Faun. Fridr. *or* Fn. Fr.; Prodr. *or* Zool. Dan. Prodr.—Müller (O. F.), Fauna Insectorum Fridrichsdalina; Zoologiæ Danicæ Prodromus.

Nat. H. Rev. *or* Nat. Hist. Review.—Natural History Review, London, 1853–1855.

Newm.—Newman, Grammar of Entomology, etc.

Nov. Act. Acad. Cæs.—Nova Acta Physico-medica Academiæ L. C. Naturæ-curiosorum, Bonn.

Olf. Comm.—Olfers, De vegetativis et animatis corporibus, etc., Berolini, 1817.

Oliv.—Olivier, Encyclopédie Méthodique.

Pal. de Beauv.—Palisot de Beauvois.

Panz. Fn. *or* Faun. Germ.—Panzer, Faunæ Insectorum Germaniæ Initia.

R. *or* Ros. *or* Ross. *or* Rs., V.—Rossi, Systematisches Verzeichniss der Zweyflügelichten Oesterreichs.

Ratz.—Ratzeburg, Forstinsekten.

Retz.—Retzius, Caroli de Geer Genera et Species Insectorum, etc.

Rdn. *or* Rond. Nuov. Ann. Sc. Nat. Bologna.—Rondani, Nuovi Annali delle Scienze Naturali, Bologna.

(Roser,) Würt. Zweyfls.—Verzeichniss d. Würtembergischen Zweyflügligen Insekten.

Sam. Comp. *or* Ent. Comp.—Samouelle, Entomologist's useful Compendium.

Schell. — Schellenberg, Genres de Mouches Diptères.

Schr. Beitr.; F. B. *or* Fn. Boic. *or* Fn. B.; Fn. Austr. *or* Ins. Austr.—Schranck, (Paula von,) Beiträge zur Naturgeschichte; Fauna Boica; Enumeratio Insectorum Austriæ.

Schumm. Dipt. Siles.; Tip.—Schümmel, Beyträge zur Entomologie im Bezug auf Schlesien, Gattung Limnobia; Gattung Tipula.

Schwægr.—Schwægrichter, *see* Ratz.

Scop., E. C. *or* Ent. Carn.—Scopoli, Entomologia Carniolica.

St. Farg. — Lepeletier St. Fargeau, Encyclopédie Méthodique, Tome X.

Stann. Observ. Spec. Mycetoph.—Stannius, Observationes de specciebus nonnullis generis Mycetophilæ, etc.

Steph. Syst. Cat. — Stephens, Systematic Catalogue of British Insects.

Stew.—Stewart's Outlines, etc.

Stg. *or* Stæger, D. D. *or* Dipt. *or* Dipt. Dan. *or* Kroy. Nat. Tids. *or* Kroy. Naturh. Tidskr.—Stæger, Kröyer's Naturhistorisk Tidsskrift, System. Fortegn. o. d. i. Danmark fundne Diptera, o. s. v.

Stnh.—Stenhammar. *See* Act. Holm.

Turt.—Turton, the System of Nature, etc.

Vall.—Vallot, A. S. N.

Vill. — Villers, Linnæi Entomologia Faunæ Suecicæ descr. aucta, etc.

Walk. *or* Wlk. C. D. B. M.—Walker, Catalogue of the Diptera of the British Museum.

Westw. Class. II. Syn. Gen. Brit. Ins. *or* Mod. Class.—Westwood, Introduction to the Modern Classification of Insects, etc.

Wied. *or* Wd. Zool. Mag.—Wiedemann, Zoologisches Magazin.

Wiegm.—Wiegmann.

Winn. Linn. Ent.—Winnertz, Linnæa Entomologica, Stettini.

Zell. *or* Zlr.—Zeller, Isis von Oken.

Zett. *or* Ztt. D. S. *or* D. Sc. *or* Dipt. Scand.; I. L. *or* Lap.—Zetterstedt, Diptera Scandinaviæ; Insecta Lapponica.

Zool. Journ.—Zoological Journal, conducted by Bell and Sowerby.

ADDENDA AND CORRIGENDA.

VOLUME I.

Page. Line.

5. 12. Some female *Ceratopogones* have the ungues unequal.

6. 19. *for* costale *read* costali.

7. Analytic table. The posterior continuation of the costal vein is so faint in many *Cecidomyzidæ*, that they might be sought for under the preceding embranchment. They may be distinguished from the *Chironomidæ* there, by the uniform flagellum of the antennæ, the terminal joints of which in the *Chironomidæ* (one or more), tend to form a club, by their disproportionate length or thickness. The veins of the wings also, in the *Cecidomyzidæ*, are usually fewer, and the membrane more hairy.

8. Analytic table. The bifurcation of the cubital vein in the *Stratiomidæ* is not universal, and this discrepancy affords a primary character for the subdivision of the genera *Stratiomys* and *Oxycera*. The table is so framed as to leave the genera *Myopa* and *Zodion* with the *Muscidæ*, in accordance with R. Desvoidy's arrangement (*Myodaires*). More lately (*Myopaires*, 1853), he has himself abandoned this conjunction, and admitted them as a distinct family, after the example of Macquart. From the *Muscidæ* they are definitely separated by the oblique direction of the humeral suture of the mesonotum, in this as well as in general habit, agreeing with the *Conopidæ*. Their internal anatomy is equally conformable, as demonstrated by Dufour (Mém. Pres. Acad. Fr. xi.), and their economy also, according to the observations of Von Heyden, in the Isis, 1842.

17. *dele* 7. **connexa** . . . (Not in Mr. Stephens' collection, probably not European.)

21. 31. A variety, with clear yellow for the ground-colour, represents *Musca hypoleon* of the Linnean collection; *see* E. Z. xii. 1851. p. 137.

23. 28. *for* Hal. MSS. *read* Dale, A. N. H. viii. (1841).

24. 21. *after* Shr. *add coccinea*, Fb.; Vill.

31. 26. add *cærulescens*, Vill.

42. 17. add *crassicornis*, Wlbg.; Ztt.

77. 40. *for* **lacchus** *read* **iacchus.**

83. *read* 1. **pulicaria,** Mk. m. b. 58. 14 (1796), etc.
dele **gibbosa,** Ol., which is probably a species of *Geron*.

88. The genus *Gloma* has been introduced into the British lists on the authority of Stephens' Systematic Catalogue, but in his collection it is represented by *Sciodromia immaculata*. The generic name *Wiedemannia* is preoccupied in botany, and both this and *Heleodromia* might well be merged in *Clinocera; see* Scholz, Schlesische Entomologische Zeitung, 1850, No. 16.

105. 9, 10. *for* 1 *read* 2, *and vice versâ.*

107. 10. *for* **lotæ** *read* **lota.**

133. 30. *add* Not rare at Holywood (I.)

136. 40. add *femorata* (*Hemerodromia*), Heeger! Sitz. Wien. Akad. ix. (1852).

147. 29, and page 236, line 13, *for* 1782 *read* 1776.

Page. Line.

149. 8. *add* Heeger has lately illustrated the transformation of *Rhaphium fascipes*, Sitzungsberichte der Wiener Akademie, ix. (1852).

165. 31. add *pallidicoxa*, Roser. *Note.* Zetterstedt, D. S. p. 4294, has described the male of his *D. parvulus*, establishing the correctness of the identification in the text.

167. 34. add *pictipennis*, Wlbg; Ztt. *Note.* The female has immaculate wings; *see* Ztt. D. S. p. 4280.

175. 18. *insert* 42*. **prætextatus**, Hal. N. H. Rev. ii. 63 (1855).

179. *D. alutifer* is better placed in g. *Porphyrops*, q. v.

180. 38. add *Aphrozeta*, Perris, Annales de la Soc. Linn. de Lyon, A. D. 1852.

186. 15. add *semiglaucus*, Perris. Occurs also on the sea-coast. (I.)

187. 1. add *cinereus*, Perris?

190. 33. add *pictipennis*, Bohemann; Ztt.

193. 9. Bohemann, Act. Holm. 1851. p. 194 (1853), has described the male, which has the face narrower, the hypopygium small, with slender, filiform appendages.

195. 27. add *pygmæum*, Ztt. D. S. p. 4618 (1855).

204. 25. *add* In September, about Blarney Lake. (I.)

206. 12. The name *Macherium* has been long preoccupied in botany, and it does not seem necessary to propose another to replace it, until the genus *Rhaphium* be definitively circumscribed; with which the species *maritimæ* may well remain united meanwhile.

212. 42. *insert* 5*. **cretifer**, Wlk. C. D. B. M. p. 653 (1849); *alutifer* (Dol.) I. B. D. i. 179. *Note.* The colour of the tarsi of the male, to which the trivial name alludes, was not noticed in the earlier description.

214. 20. *read* Very common. (E. S. I.)

214. last line, *read* Not rare on the seacoast. (E. I.)

214. *insert* 12. **muralis**, Mg. Zw. iv. 62. 5 (1824).

216. last line, *add* The wings are incumbent in repose, which character alone is sufficient to take this group out of the definition of the genus *Chrysotus*.

221. 18. *insert* 1*. **celtiber**, Hal. N. H. Rev. ii. 63 (1855).

221. 35. *add* (I.)

231. 38. Dahlbohm, Act. Holm. Consp. 1854 (1855), has illustrated the transformation of *P. fuscipes*. The larva inhabits the body of various Homopterous Hemiptera.

234. 8. dele *Sclerostoma, etc.*, to end of the line.

234. 9. for *Chetolona* read *Chetoloxa*.

235. 7. *for* areolet *read* areolets.

237. The genus MALLOTA should have a place here, being represented in the British Fauna by **M. vittata**, Mg. Zw. iii. 378; *ruddii* (*Helophilus*), Ct. B. E. 429; which last has been erroneously cited in the present work as synonymous with *Helophilus lunulatus*. This correction, supplied by Professor Loew, has been confirmed by the collation of a specimen from Meigen's collection, and ticketed by his own hand, in the possession of Mr. Winnertz.

240. 13. add *viridescens*, Vill. iii. 463, 138.

243. *E. fumipennis*, as appears from Stephens' Systematic Catalogue, 288, g. 122, 10, was not captured nor seen alive by himself. It is probably an American insect, allied to *E. vinetorum*, Fb., and *E. uvarum*, Wlk.

249. 30. *for* luteo-vittato *read* nigro-vittato.

269. *Psilota anthracina*. No authentic British specimen: represented in Stephens' collection by species of the genus *Pipiza*.

298. *Melithreptus*. This generic name is preoccupied in ornithology.

VOLUME II.

Page. Line.

14. **Tachina phalerata**, Mg. Zw. iv. 285, is the type of g. PLESINA, Mg. Zw. vii. 214.
106. *insert* g. IDIA, Mg.—sp. 1. **fasciata**, Mg.
111. 13. **vitripennis** has been introduced without sufficient authority, as it seems, being represented in British collections by a variety of *M. domestica*.
117. The g. CŒLOMYIA, Hal. (Wwd. Mod. Class.) is also referable to ANTHOMYIA in the wide sense of the text, the type of it being *Aricia spathulata*, Ztt. D. S.
146. Here the g. ERIPHIA should come in, according to Stephens' Systematic Catalogue, but in his collection it is represented by an *Anthomyia*, Mg.
152. *insert* g. LEPTOPA, Ztt.—sp. **filiformis**, Ztt.; *flava* (*Cordylura*), Hal.
153. running title, *for* CORDYLURA *read* SCATOPHAGA.
155. *read* 5. **ostiorum**, Hal.; *borealis*, Ztt.; *oceana*, Meq.?
155. *read* 16. **maritima**, Hal.; *marina*, Meq.
156. *insert* g. THYREOPHORA, Latr.—sp. **furcata**, Fb.
156. 26. add *eximia*, Stnh.
157. 3. *read* 1. **simplex**, Hal.; *frigida*, Stnh.
157. 4. *read* 2. **parvula**, Hal.; *nitidula*, Ztt.; Stnh.
157. g. MALACOMYIA, Hal.; *Phycodromia*, Stnh.—sp. **sciomyzina**, Hal.; *fucorum*, Ztt.; Stnh.
160. 32. *read* 6. **schœnherri**, Fln. Suppl. (1827); *monilis*, Mg.
163. **Heteromyza oculata**, Fln., is the type of g. THELIDA, Desv.
163. 15. add *Clusia*, Hal.; Wwd. Mod. Class.; *Macrochira*, Ztt.
163. 21. *add* Ztt.; *spurca*, Hal. E. M.
167. 20. *read* 5. **albiseta**, Scop. E. C. (1763); *aratoria*, Fb., etc.
169. 1. *read* 10. **punctulata**, Scop. E. C. (1763); *hieracii*, Fb., etc.
169. 31. *read* 2. **unguicornis**, Scop. E. C. (1763); *pratorum*, Fln.
170. 28. *read* 2. **spinipes**, Scop. E. C. (1763); *hæfneri*, Fln.; Mg.; Mq.; Ztt.; *ferrugineus*, Dufour; *aquaticus*, Desv.
171. 28. *insert* g. TRIGONOMETOPUS, Mq.; *Oxyrrhina*, Mg.—sp. 1. **frontalis**, Mg.
174. 1. *read* 5. **pusilla**, Fln. D. S. (1820); Ztt.; Stnh.; *scabricula*, Hal.
179. 35. *add* Stnh.; *abbreviata* (*Agromyza*), Fln.
186. 13. 6. **sordida**, Hal.; *decipiens* (*Sapromyza*), Loew.
187. g. PALLOPTERA: of the species given under this genus, only sp. 4, 5, 6, 7, 9, 12, belong to it; the rest to SAPROMYZA, Fln.
191. 14. *read* 12. **lamed**, Schr. I. A. (1781); Lw.—*pulchella*, Fb.; Mg.; *muliebris*, Harris!; *fasciata*, Mq.
191. 36. sp. 3. **femorella**, belongs to the g. SCYPHELLA, Desv. Closely allied is g. CHIROMYIA, Desv.—sp. 1. **fenestrarum**, Desv.; *consobrina*, Ztt.
192. 29. add *maritima*, Ztt.
194. 27. The g. TIMIA has been introduced into the British list, but the specimens supposed to represent it are *Ulidia erythrophthalma*, Mg.
212. 27. add *lucida*, Stg.; Ztt.
222. 32. add *pectoralis*, Ztt.
229. 41. *read* 9. **lateralis**, Hal.; *scutellaris*, Ztt.
229. 42. *read* 10. **fulvifrons**, Hal.; *erythrocephala*, Ztt.
229. The g. HOMALURA has been introduced into the British lists, on the authority of Stephens' Systematic Catalogue, but the specimens, "*H. tarsata*," in his collection, are *Gymnopa glabra*.
235. 10. *read* 2. **sabulosa**, Hal.; *brevipennis*, Ztt.
235. *insert* g. LIOMYZA, Meq.—sp. 1. **scatophagina** (*Heteroncura*), Fln.

Page. Line.

235. *insert* g. COLOBÆA, Ztt.; *Geomyza* p., Fln.; *Sciomyza* p., Mg.—sp. 1. **bifasciella**, Fln.; Ztt.; *concentrica*, Mg.

236. 15. *read* 1. **fuscula**, Fln. D. S. (1820); *costata*, Mg.(?); Ztt. D. S.; *marginella*, Ztt. I. L.; *fulvifrons*, Hal.

236. *insert* g. AULACIGASTER, Mq. I. D. ii. 579 (1835); Ztt.; *Ampycophora*, Wlbg.—sp. **rufitarsis**, Mq.; Ztt.; *tarsata*, Wlbg.; *ruficeps* (*Notiphila*), Mg.?

236. *insert* g. CAMILLA, Hal. (Wwd. Mod. Class.); *Drosophila* p., Fln.; Mg. —sp. 1. **glabra**, Fln. D. S. Geom. 8. 12 (1820).

238. 40. *read* 6. **flaveola**, Mg. Zw. vi. 66 (1830); Perris; Heeger; *flava*, Ct.; *apicalis*, Hardy; *pallida*, Ztt.

239. 22. Belongs to g. OPOMYZA, Mg.; *Leptomyza*, Mq.; *Anthophilina*, Ztt.; *see* p. 240.

239. *insert* g. STEGANA, Mg. Zw. vi. 79 (1830); Mq.; Wwd.; Ztt.; *Drosophila* p., Fln.; *Musca* p., L.; Scop.

1. **coleoptrata**, Scop. E. C. 907 (1763); *hypoleuca*, Mg.; Mq.; Ztt.; *annulata*, Hal.

2. **furta**, L. S. N. xii. II. 991. 72 (1767); *curvipennis*, Fln.; *nigra*, Mg.; Mq.; Ztt.

240. *insert* g. MILICHIA, Mg.—sp. 1. **maculata**, Mg., was reared, from larvæ feeding on fungi, by the late Miss Knight.

240. *insert* g. HETERONEURA, Fln.—sp. 1. **albimana**, Mg.

247. 38. *add* The larva mines the leaves of *Populus nigra*.

282. 5. *for* **galatea** *read* **galeata**.

289. *insert* g. OXYPTERUM, Leach (1817); *Anapera*, Mg.—sp. 1. **pallidum**, Leach; *hirundinis*, Pz.—2. **kirbyanum**, Leach.

VOLUME IV.

Page. Line.

7. 37. *dele the second* but.

7. last line, *for* forks *read* veins.

43. running title, *for* TETRAGONEURA *read* SCIOPHILA.

50. G. *Planetella*, Wwd.; *Planetes*, Wlk., may probably be reduced to SCIARA.

56. 16. 24. *brevipennis* is a *Campylomyza*, according to Mr. Haliday.

62. 34. 5. **globifera**, exemplifies the g. MICROMYIA, Rondani.

139. 5. The females with black thorax are referred to *B. clavipes*. The males of both are very like each other, but there appears to be a difference in the length of the tarsi, and the diffusion of the stigmatical spot of the wing.

254. 25. *for* twelve *read* fourteen.

261. 29. *for* 12-articulatæ *read* 14-articulatæ.

264. 10. Stæger's description of the aquatic larva of *Dixa nigra* seems rather to favour the affinity to the *Tipulidæ*, but is not sufficiently explicit as to some important points to justify a positive conclusion.

269. This analytic table was drawn up without reference to two British species, the introduction of which will require certain modifications of it; and as the table was previously affected by a serious misprint, it is given here over again, with these corrections; *see next page*. The species referred to are *Cylindrotoma glabrata*, Mg. (Zw. i. 142, vi. 274), figured in Plate XXVII. fig. 8, and *Limnobia occulta*, Mg., for which see page 302, sp. 48. The latter is the type of the genus AMALOPIS, distinguished from the other groups that have been separated from *Limnobia*, not only by the characters of venation specified in the table, but also by the hairy eyes, and by the frontal tubercle, which seems to foreshadow the appearance of ocelli in that region, towards which the subsidiary optic nerves run, in the *Tipulidæ*, although those organs are as yet undeveloped.

315. 1. *for* **venosa** *read* **rivosa**, *and dele* F.

341. 30. The trivial name **fenestralis** has the right of priority. *Annulata*, L., is an error of the press in the S. N. for *annotata*; *see* Ent. Zeitung, xii. 1851, p. 135.

R. cinctus, Fb., with which *ochraceus*, Ct., is identical, is considered by Zetterstedt as a distinct species.

- Wingless . . . . . CHIONEA.*
- Winged: Anal vein
  - distinct: Axillary vein
    - very short, incurved to the anal angle . . . . . 1. TRICHOCERA.
    - extending beyond the anal angle: Externo-medial veins arising from the brachial areolets
      - two
        - simple, detached . . . . . 2. ANISOMERA.
        - multiplied before the end: Palpi
          - rigid and very short . . . . . 9. GERANOMYIA.
          - flexible, usually 4-jointed: Rostrum
            - longer than the rest of the head . . 8. RHAMPHIDIA.
            - shorter than the rest of the head: Antennæ
              - 12-jointed . . . . . 13. DOLICHOPEZA.
              - 13-jointed . . . . . 6. DICRANOTA.
              - 14-jointed .
                - remote-moniliform, bipectinate in the male . . 10. RHIPIDIA.
                - compact-moniliform, unbranched in either sex . . 5[a]. LIMNOBIA. (Glochina, *Mg.*)
              - 16- (*or* 15-?) jointed: Cubital vein
                - simple: Externo-medial veins ending in
                - three: Axillary vein
                - sinuous . . . 4. SYMPLECTA.
                - nearly straight: Middle legs
                - shortest . 3. ERIOPTERA.
                - equal . 5[b]. LIMNOBIA, (*proprie dictum.*)
                - four: Pobrachial areolet
                - entire . 5[c]. LIMNOBIA. (Limnophila, *Mcq.*)
                - bisected 5[d]. LIMNOBIA. (Idioptera, *Mcq.*)
                - forked: Discal areolet
                - none 5[e]. LIMNOBIA. (Tricyphona, *Ztt.*)
                - one . 12. PEDICIA.
              - 17-jointed: Last joint of palpi . . .
                - much the longest 7. ULA.
                - nearly equal . . 11. CYLINDROTOMA.
      - three (with an additional branch subsequent: Discal areolet . . .
        - none . . . . . 5[f]. LIMNOBIA. (Amalopis, *Hal.*)
        - one: Antennæ .
          - of more than 13 joints 14. NEPHROTOMA.
          - 13-jointed
            - unbranched in either sex 15. TIPULA.
            - pectinated in the male 16. CTENOPHORA.
  - obsolete; a fold in place of it . . . . . 17. PTYCHOPTERA.

* Not British, as far as known.

GENERAL INDEX.

The following General Index to the three volumes of DIPTERA, the first, second, and fourth of 'Insecta Britannica,' contains the Generic names and Synonyms of the text, along with most of those in Stephens' Systematic Catalogue, Curtis's Guide, and the generic synopsis in Westwood's Introduction. Synonyms and Subgenera are in *Italics*, but in some extensive groups of the text, as *Anthomyia*, it has not been attempted so to reduce the groups, many of which must be ultimately admitted. The large Roman numerals indicate the volume, the small ones the pages of the Introduction to the fourth volume, the Arabic numerals the pages of the rest; but, when preceded by sp., the number of some species, in the last-quoted page, which exemplifies the subgenus or group. It has not been thought necessary to notice slight differences of orthography in the names, unless where the name might in consequence be out of sight in the place looked for.

Acidia, Desv., II. 199, sp. 3.
Acinia, Desv., II. 198, 204, sp. 16.
Aciura, Desv., II. 199, sp. 2.
Acrocera, I. 44, 45.
Actia, Desv., II. 17.
Actina, I. 10, 12.
Actissa, Ag., *v.* Atissa.
Actora, II. 149, 157.
Adia, Desv., *v.* Anthomyia, p.
Æcothea, Ag., *v.* Œcothea.
Aëdes, IV. 242.
Ægeria, Desv., II. 145, sp. 15.
Ægle, Desv., II. 137, sp. 56.
Agria, Desv., II. 101.
Agromyza, II. 241.
Alcephagus, IV. 343.
Alophora, II. 7.
Amalopis, IV. xv, xvi. 302.
Aminta, Desv., *v.* Homalomyia.
Ammobates, I. 154.
Ammobia, Desv., *v.* Miltogramma.
Ampycophora, Wlbg. IV. xiv.
Ananta, II. 7.
Anapera, II. 288.
Anarete, IV. 7, 60.
Anglearia, I. 193, 200, sp. 12.
Anisomera, IV. 269, 272.
Anisophysa, II. 213.
Anisopus, IV. 340.
Anomœa, Wlk., II. 198, sp. 1.
Anopheles, IV. 242, 248.
Anthomyia, II. 117.
Anthomyza, II. 117.
Anthophilina, IV. xiv.
Anthracia, *Mg.*, II. 99, sp. 5.
Anthrax, I. 73, 76.
Antichæta, Hal., *v.* Sciomyza, p.
Antipalus, I. 50.
Aphritis, I. 239.
Aphrosylus, I. 149, 220.
Aphrozeta, IV. xii.
Aporosa, Mcq., *v.* Geranomyia.
Apterina, II. 174.
Araba, Desv., II. 83, sp. 146.
Ardoptera, I. 88, 103.
Argyra, I. 149, 207.
Argyrites, Latr., *v.* Milichia.
Aricia, II. 117, 129, sp. 32, etc.
Ascia, I. 237, 302.
Asilus, I. 47, 49.
Asindulum, IV. 6, 46.
Asphondylia, IV. 76.
Aspistes, IV. 134, 144.
Asteja, II. 232, 239.
Asynapta, IV. 77.
Asyndulum, *v. Asindulum.*
Ateleneura, I. 233.
Atelestus, I. 229.
Atherix, I. 63, 69.
Athrycia, *v.* Atrichia.
Atissa, II. 255, 258, IV. 345.
Atomogaster, *Mcq.*, II. 117, 145, sp. 63.
Atractocera, IV. 146.

Atrichia, Schr., I. 84.
Atrichia, *Desv.*, II. 16.
Aulacigaster, IV. xiv.
Axysta, II. 259, 262; IV. 345.
Azana, IV. 6, 26, 342.
Azelia, Desv., *v.* Atomogaster.

Baccha, I. 237, 300.
Bacchis, Desv., *v.* Limosina, p.
Baumhaueria, II. 19.
Beris, I. 10, 11.
Bibio, IV. 134.
Bibio, Fb., I. 73, 76, 79.
Blephariptera, II. 162.
Boletina, IV. 6, 33.
Bolitophila, IV. 7, 71.
Bombylius, I. 73, 80.
Borborus, II. 172, 174.
Brachyneura, IV. 73.
Brachyopa, I. 237, 277.
Brachypalpus, Mcq., *v.* Spilomyia.
Brachystoma, I. 88, 102.
Bucentes, II. 6, 12.

Cænia, II. 259, 264; IV. 346.
Callibæa, Ag., *v.* Colobæa.
Callicera, I. 237, 238.
Callimyia, Ag., v. Callomyia.
Calliope, Hal., *v.* Lauxania, p.
Calliphora, II. 107, sp. 1, 2.
Callomyia, I. 224, 227.
Callomyza, Fln., *v.* Callomyia.
Calobæa, Ag., *v.* Colobæa.
Calobata, II. 208, 214.
Camarota, II. 223, 224.
Camilla, IV. xiv.
Campsicnemus, I. 149, 187.
Camptosceles, I. 187.
Campylomyia, IV. 61.
Campylomyza, IV. 7, 61.
Canace, II. 259, 268; IV. 346.
Carcelia, II. 15, 17.
Caricea, Desv., II. 132, sp. 41.
Cassidæmyia, II. 18.
Catocha, IV. 7, 59.
Cecidogona, IV. 7, 58.
Cecidomyia, IV. 73.
Cecidomyza, IV. 73.
Celeripes, II. 290.
Cephalemyia, II. 269, 271.
Cephalops, I. 231, 233.
Ceratitis, Macleay, *v.* Trypeta, p.
Ceratocera, II. 250, 252.
Ceratophyllus, *v.* Ceratopsyllus.
Ceratopogon, IV. 149, 205.
Ceratopsyllus, IV. 1.
Cerdistus, I. 50.
Ceria, I. 237, 238.
Ceria, Scop., IV. 140.
Ceroxys, II. 195.
Ceyx, II. 214.
Chætocera, II. 159.
Chalarus, I. 231, 233.
Chamæmyia, II. 191.
Cheilosia, *v.* Chilosia.
Cheligaster, Mcq., *v.* Themira.
Chenesia, IV. 264.
Chersodromia, I. 88, 137.
Chersothea, *v.* *Halithea*.
Chetocera, Desv., *v.* Chætocera.
Chilosia, I. 237, 280.
Chiomyza, Ag., *v.* Chiromyia.
Chione, Desv., II. 166, sp. 3.
Chionea, IV. 269.
Chionea, IV. 56.
Chiromyia, IV. xiii.
Chironomus, IV. 149.
Chloe, Desv., *v.* Anthomyia, p.
Chloromyia, I. 27.
Chlorops, II. 223, 226.
Chortophila, *Mcq.*, II. 140, sp. 68, etc.
Chromatomyia, Hardy, *v.* Agromyza, p.
Chrysochlamis, I. 237, 279.
Chrysogaster, I. 237, 274.
Chrysomyia, I. 10, 27.
Chrysomyza, Fln., *v.* Mosillus.
Chrysopilus (*Chrysopila*), I. 63, 67.
Chrysops, I. 35, 42.
Chrysosoma, II. 15.
Chrysotoxum, I. 237, 263.
Chrysotus, I. 149, 216; IV. xii.
Chyliza, II. 215, 219.
Chyromya, Desv., *v.* Chiromyia.
Cistogaster, Ltr., *v.* Cystogaster.
Clasiopa, IV. 344.
Cleigastra, Mcq., *v.* Cordylura, p.
Cleora, Hal., *v.* Clusia.
Clinocera, I. 107; IV. xi.
Clinorrhyncha, IV. 132.
Clista, II. 15.
Clitellaria, I. 10, 23.
Clunio, I. 149, 241.
Clusia, IV. xiii.
Clytia, II. 14, 33, sp. 32.
Cœlomyia, IV. xiii.
Cœlopa, II. 149, 156.
Cœnia, Desv., *v.* Cænia.
Cœnosia, II. 117, 146.
Colobæa, IV. xiv.
Colpodia, IV. 76.
Coniocera, II. 276, 281, sp. 15.
Conops, I. 305.
Conops, Scop., I. 284, etc.
Coprina, Desv., II. 172.

Coprina, Ztt., I. 253.
Copromyza, II. 172, 174.
Cordyla, IV. 7, 25.
Cordylura, II. 149.
Corethra, IV. 242, 250.
Corynoncura, IV. 149, 203.
Crameria, II. 100.
Crassiseta, *Roser.*, II. 230, sp. 2.
Craterina, II. 288.
Criorrhina, I. 237, 258.
Ctenophora, IV. 269, 333.
Culex, IV. 242, 243.
Culicoides, IV. 207.
Curtoneura, *v.* Cyrtoneura.
Cylindrotoma, IV. 269, 312, xv, xvi.
Cynomyia, II. 101, 105, sp. 9, 10.
Cyrtoma, I. 88, 115.
Cyrtoneura, II. 107.
Cystogaster, II. 15.

Dacus, II. 187, 198.
Dasyna, II. 219.
Dasyneura, IV. 75.
Dasyphora, II. 106.
Dasypogon, I. 47, 56.
Degeeria, II. 18, 19.
Delia, Desv., II. 145, sp. 57.
Delina, II. 149.
Demoticus, *Mcq.*, II. 298, sp. 36.
Dexia, II. 93, 94.
Diadocidia, IV. 7, 48.
Diamesa, IV. 193.
Diamesa, Mg., IV. 57.
Diaphorus, I. 149, 215.
Diastata, II. 232, 235.
Dichæta, II. 250, 251; IV. 344.
Dicranomyia, Steph., *v.* Limnobia, p.
Dicranota, IV. 269, 305.
Dictenidia, IV. 333.
Dictya, Desv., II. 160, sp. 4.
Didea, I. 284.
Dilophus, IV. 134, 139.
Dincra, II. 94.
Dioctria, I. 47, 58.
Diomyza, Meg., *v.* Lasioptera.
Diplosis, IV. 75.
Dipsa, I. 222.
Dirrhiza, IV. 77.
Discocerina, II. 250, 253; IV. 344.
Discomyza, II. 250, 251; IV. 344.
Ditomyia, IV. 7, 63.
Dixa, IV. 264, 266, xv.
Dolichopeza, IV. 269, 315.
Dolichopus, I. 149, 154.
Doria, II. 19, 88, sp. 156.
Doros, I. 237, 296.
Dorycera, II. 149, 170.
Drapetis, I. 88, 135.
Drosophila, II. 232, 236.
Drymia, II. 146.
Dryomyza, II. 149, 163.
Dryope, II. 163.
Dyctia, Desv., *v.* Dictya.

Echinomyia, II. 14.
Echthistus, I. 50.
Egeria, Desv., *v.* Ægeria.
Egle, Desv., *v.* Ægle.
Elachiptera, Mcq., *v.* Crassiseta.
Elaphropeza, I. 134.
Elgiva, Mcq., *v.* Chione.
Elomyia, *v.* Helomyia.
Elophilus, I. 247.
Empis, I. 88, 89.
Enicu, *v.* Henica.
Enicita, *v.* Henicita.
Enicopteryx, *v.* Henicopteryx.
Enicopus, *v.* Henicopus.
Ensina, II. 198.
Ephippium, I. 23.
Ephydra, II. 249, 259, 268; IV. 346.
Epidapus, IV. 7, 56.
Epidosis, IV. 77.
Epipela, IV. 345.
Epitriptus, I. 50.
Erax, Scop., *v.* Asilus.
Erebia, II. 15, 31, sp. 27.
Erioptera, IV. 269, 273.
Eriopteryx, Steph., *v.* Erioptera.
Eriothrix, *Mg.*, II. 34, sp. 34.
Eriphia, IV. xiii.
Eristalis, I. 237, 243.
Eristalis, Fln., I. 280.
Estelia, II. 191.
Estheria, II. 94.
Euleja, Wlk., *v.* Aciura.
Eumerus, I. 237, 240.
Eurhina, II. 171.
Eurygaster, II. 18, 19.
Euthycera, Latr., *v.* Tetanocera.
Euthyneura, I. 88, 111.
Eutolmus, I. 50.
Exorista, II. 17, 19.

Fabricia, II. 16, 20, sp. 4.
Fallenia, II. 19.
Fannia, Desv., II. 145, sp. 38–40.
Fellæa, Desv., II. 128, sp. 29.
Ferdinandia, I. 279.
Flebotomus, *v.* Phlebotomus.
Forcipomyia, IV. 207.
Forellia, II. 198.
Frontina, II. 18.
Fucomyia, *v.* Phycomyia.

Furcomyia, Meg., *v.* Limnobia, p.

Gasterophilus, II. 269, 278.
Gastrus, II. 278.
Geomyza, Fln., II. 234, sp. 3, 4.
Geranomyia, IV. 269, 310.
Glenanthe, II. 255, 258; IV. 345.
Glochina, IV. 269, 342.
Gloma, IV. xi.
Gonia, II. 6, 12.
Gonomyia, Meg., *v.* Limnobia, p.
Gonypes, I. 62.
Graphomyia, II. 107, 114, sp. 19.
Gymnochæta, II. 15.
Gymnopa, II. 232.
Gymnophora, II. 276, 282, sp. 18.
Gymnosoma, II. 6, 11.

Hæmatobia, II. 116.
Hæmatopota, I. 35, 41.
Hæmobora, II. 284, 287; IV. 343.
Halithea, *v.* Chersothea, II. 155.
Halmopota, IV. 346.
Harrisia, II. 15, 17, 18.
Hecamede, II. 250, 254; IV. 344.
Helcomyza, II. 157.
Heleodromia, I. 88, 105; IV. xi.
Heleomyza, Fln., *v.* Helomyza.
Helina, Desv., II. 145, sp. 26.
Helobia, IV. 278.
Helomyia, II. 7.
Helomyza, II. 149, 161.
Helophilus, I. 237, 247.
Hemerodromia, I. 88, 142.
Henica, I. 284.
Henicita, II. 207, 209.
Henicopteryx, *v.* Rhamphomyia, p.
Henicopus, II. 209.
Henops, I. 44, 46.
Heramyia, II. 194.
Herbina, Desv., *v.* Helomyza, p.
Herina, II. 195, 197, sp. 6 *bis*.
Hesyquillia, Desv., *v.* Platystoma.
Heteromyza, II. 149, 163; IV. xiii.
Heteroneura, IV. xiv.
Heteropeza, IV. 73.
Heteroptera, II. 172, 183.
Hexatoma, IV. 272.
Hilara, I. 88, 97.
Hippobosca, II. 284.
Hirtea, Fb., IV. 134, 139.
Hirtea, Scop., I. 13.
Homalomyia, Bouché, II. 117, 136, sp. 53; 145, sp. 38–40.
Homalura, IV. xiii.
Hormomyia, IV. 76.
Hyadina, II. 259, 261; IV. 345.
Hyalomyia, II. 7.
Hybos, I. 88, 120.
Hydrellia, II. 249, 254; IV. 344.
Hydrina, II. 259, 260; IV. 345.
Hydrobænus, IV. 193.
Hydrochus, I. 193.
Hydrodromia, I. 105.
Hydromyia, Desv., II. 167, sp. 5, etc.
Hydromyza, Fln., II. 152, sp. 13.
Hydrophoria, II. 117, 145, sp. 20, etc.
Hydrophorus, I. 149, 180.
Hydrophorus, Meq., I. 218.
Hydrotæa, II. 117, 140, sp. 66, etc.
Hygrella, II. 250, 252; IV. 344.
Hylemyia, II. 117, 145, sp. 6, etc.
Hypoderma, II. 269.
Hypoleon, I. 19.
Hypophyllus, I. 153.
Hypostena, II. 19.

Idia, IV. xiii.
Idioptera, IV. 269, 281.
Illigera, II. 12, 13, sp. 2.
Ilythea, II. 259, 264; IV. 345.
Isopogon, I. 57.
Ischnopsyllus, IV. 1.
Itamus, I. 50.

Keratocera, Desv., *v.* Ceratocera.

Labidigaster, II. 15.
Labidomyia, IV. 207.
Laphria, I. 47.
Lasioptera, IV. 73, 132.
Lasiopteryx, Steph., *v.* Lasioptera.
Lauxania, II. 184, 185.
Leja, IV. 6, 26.
Lejomyza, *v.* Liomyza.
Lentiphora, Desv., *v.* Heteromyza, p.
Leptarthrus, Steph., *v.* Isopogon.
Leptina, IV. 315.
Leptis, I. 63, 64.
Leptogaster, I. 47, 62.
Leptomorphus, IV. 7, 48.
Leptomyza, II. 240; IV. xiv.
Leptopa, IV. xiii.
Leptopeza, I. 88, 117.
Leptopus, I. 150.
Leptorrhina, IV. 308.
Leptoscelis, I. 103.
Leptotena, IV. 343.
Leria, II. 149, 162.
Lestremia, IV. 7, 57.
Leucophora, Desv., *v.* Anthomyia, p.
Leucopis, II. 240.
Leucostoma, II. 15, 37, sp. 40.
Limnia, Desv., I. 166, sp. 1.

Limnobia, IV. 269, 280.
Limnobiorrhynchus, Wwd., *v.* Geranomyia.
Limnophila, IV. 269.
Limnophora, II. 117, 142, sp. 74.
Limonia, IV. 280.
Limonobia, *v. Limnobia.*
Limonophila, *v. Limnophila.*
Limosia, II. 146, sp. 8.
Limosina, II. 172, 177.
Linnemyia, Desv., II. 28, sp. 21: 56, sp. 85.
Liomyza, *Macq.*, IV. xiii.
Lipoptena, IV. 343.
Lipoptera, *v.* Lipoptena.
Lisella, Desv., *v.* Scyphella.
Lissa, II. 217, 218.
Lomatia, I. 73, 79.
Lonchæa, II. 184, 186.
Lonchoptera, I. 222.
Lophonotus, I. 50.
Lordatia, II. 172.
Loxocera, II. 215, 217.
Lucilia, II. 100.
Lucina, II. 171.
Lycia, II. 187.
Lydella, II. 16, 298, sp. 41.
Lypha, II. 16.

Machærium, I. 149, 206; IV. xii.
Machimus, I. 50.
Macquartia, Mg., II. 15, 289, sp. 13.
Macquartia, Ztt., IV. 9.
Macrocera, IV. 7, 68.
Macrochira, Mg., *v.* Ochthera.
Macrochira, Ztt., IV. xiii.
Macroneura, IV. 48.
Macrorrhyncha, IV. 46.
Macrosoma, II. 119, sp. 1.
Macrostyla, IV. 59.
Madiza, II. 230, 231, sp. 8.
Malacomyia, II. 157; IV. xiii.
Mallota, IV. xii.
Masicera, II. 18.
Meckelia, II. 195, sp. 3.
Medetera, IV. 343.
Medeterus, I. 149, 218.
Medeterus, I. 187.
Medoria, *Desv.*, II. 289, sp. 37.
Megæra, Desv., II. 40, sp. 47.
Megarrhina, IV. 308.
Meigenia, *Desv.*, II. 298, sp. 28.
Melania, II. 94.
Melanophora, II. 15, 33, sp. 31.
Melieria, II. 195, sp. 1, etc.
Melina, Desv., *v.* Sciomyza, p.
Melinda, II. 109, sp. 8.
Melithreptus, I. 237, 298; IV. xii.
Melitrophus, *v. Melithreptus.*
Melophagus (*Melophaga*), II. 284, 289.
Melophila, II. 289.
Merodon, I. 237, 251.
Meromyza, II. 223, 224.
Mesembrina, II. 107, 115, sp. 21.
Messala, IV. 71.
Metopia, II. 18.
Metopina, II. 276, 282, sp. 17.
Micraptoma, Wwd., *v.* Xylota.
Microcera, Mg., I. 231.
Microcera, Ztt., I. 107.
Microdon, I. 237, 239.
Micromyia, IV. xv.
Micropalpus, II. 15, 28, sp. 21.
Micropeza, II. 215, 216.
Micropeza, Desv., II. 208.
Microphorus (*Microphora*), I. 88, 113.
Milesia, I. 237, 256.
Milichia, IV. xiv.
Miltogramma, II. 52, sp. 76.
Minettia, II. 187, 191, sp. 5, etc.
Mintho, Desv., II. 94, sp. 1.
Mochlonyx, IV. 242, 252.
Molobrus, IV. 50.
Molophilus, IV. 274.
Morellia, II. 107, 113, sp. 17.
Morinia, *Desv.*, II. 99, sp. 1–3.
Mosillus, *Ltr.*, II. 194, sp. 1.
Mosina, II. 149, 150, sp. 2.
Mulio, I. 239, 267, 269.
Musca, II. 105.
Muscina, II. 107, 113, sp. 18.
Mycetia, II. 174, 177.
Mycetobia, IV. 7, 49.
Mycetophila, IV. 6, 8.
Mydæa, II. 128, sp. 28.
Mydina, II. 130, sp. 36.
Myobia, II. 16, 19, 64, sp. 102.
Myocera, Desv., II. 99, sp. 8.
Myodina, II. 194, 197, sp. 7.
Myolepta, I. 254.
Myopa, II. 3, 4; IV. xi.
Myophora, II. 101.
Myopina, II. 146, sp. 13.
Myopites, II. 198.

Napæa, II. 259, 263; IV. 345.
Napomyza, Hal., II. 245, sp. 1.
Neæta, II. 198.
Nematocera, Mg., *v.* Anisomera.
Nemopoda, II. 207, 210.
Nemorea, II. 15, 71, sp. 120.
Nemotelus, I. 10, 24.
Nemotelus, I. 26, 27, 30, etc.
Nephrotoma, IV. 269, 316.

Nerea, II. 174, 177.
Neria, II. 214.
Nirmomyia, II. 284.
Nitellia, II. 106, 115, sp. 6, 7.
Noda, Schell., *v.* Phora.
Norellia, II. 149, 151, sp. 4.
Notiphila, II. 249, 250; IV. 344.
Nupharia, II. 149, 152, sp. 11, 12.
Nycteribia, II. 290.
Nyctia, *Mcq.*, II. 99, sp. 4.

Oblicia, II. 219.
Ochthera, II. 249; IV. 344.
Ochthiphila, II. 184, 191.
Ocydromia, I. 88, 118.
Ocyptera, II. 6, 8.
Odontocera, II. 244.
Odontomyia, I. 13.
Œcothea, Hal., II. 163, sp. 8.
Œdalea, I. 88, 111.
Œnopota, II. 236.
Œstrus, II. 269.
Ogcodes, I. 46.
Oinopota, Kby., *v.* Œnopota.
Oligotrophus, IV. 73.
Oliviera, II. 15, 16.
Oncodes, *v. Ocgodes.*
Onesia, II. 115, sp. 8.
Oodigaster, *Mcq.*, II. 30, sp. 25.
Opetia, I. 224, 229.
Ophyra, II. 117, 145, sp. 51, 61, 62.
Opomyza, II. 232, 233.
Orellia, Desv., *v.* Trypeta, p.
Ornithobia, II. 284, 285; IV. 343.
Ornithomyia, II. 284, 286.
Ornithomyza, II. 286.
Orphnephila, IV. 263, 264.
Ortalis, II. 193, 194.
Orthobates, I. 218.
Orthoceratium, I. 154.
Orthochile, I. 149, 179.
Orthoneura, I. 237, 273.
Ortochile, *v.* Orthochile.
Orygma, II. 149, 157.
Osciuis, II. 223, 230.
Oscinis, Desv., II. 223.
Otites, Ltr., II. 197, sp. 2.
Oxycera, I. 10, 19; IV. xi.
Oxyna, Desv., II. 203, sp. 13.
Oxyphora, Desv., *v.* Myopites, p.
Oxypterum, II. 288; IV. xiv.
Oxyrrhina, IV. xiii.
Oxyrrhynchus, IV. 73.
Ozirhynchus, Rdn., *v.* Oxyrrhynchus.

Pachygaster, I. 10, 26.
Pachymerina, I. 89.
Pachypalpus, IV. 25.
Pachyrrhina, IV. 330.
Pales, II. 18.
Palloptera, II. 184, 187; IV. xiii.
Palpomyia, IV. 208.
Palusia, Desv., II. 146, sp. 7, etc.
Pamponerus, I. 50.
Pandora, II. 213.
Panzeria, II. 15.
Paragus, I. 237, 267.
Paramesia, I. 105.
Parthenia, Desv., II. 8, 9, sp. 2.
Parydra, IV. 345.
Pedicia, IV. 269, 314.
Pegomyia, II. 117, 144, sp. 78, 79, etc.
Pelina, II. 259, 262; IV. 345.
Peplomyza, II. 187.
Pericoma, IV. 254, 256.
Perithinus, I. 193.
Peronecera, IV. 272.
Petalophora, Mcq., *v.* Ceratitis.
Phalænomyia, IV. 261.
Phania, II. 6, 10.
Phantasma, II. 216.
Phaonia, Desv., II. 126, sp. 24.
Phasia, II. 6, 7.
Pherbellia, II. 159.
Pherbina, Desv., II. 169, sp. 10, etc.
Philinta, Desv., II. 136, sp. 53.
Philonicus, I. 50.
Philygria, IV. 344.
Phlebotomus, IV. 253.
Phora, II. 276.
Phoræa, Desv., II. 143, sp. 77.
Phormia, Desv., II. 115, sp. 3.
Phorocera, II. 17, 18.
Phrosia, II. 149.
Phryno, II. 18, 90, sp. 161.
Phryxe, II. 18.
Phthiria, I. 83; IV. xi.
Phthiridium, II. 290.
Phycodromia, IV. xiii.
Phycomyia, II. 156.
Phyllis, Desv., II. 146, sp. 82.
Phyllodromia, I. 88, 142.
Phyllomyia, II. 94.
Phyllomyza, Hal., *v.* Peplomyza.
Phyllomyza, Ztt., *v.* Agromyza, p.
Phytomyza, II. 244.
Phytophaga, IV. 75.
Piophila, II. 216, 221.
Pipiza, I. 237, 269.
Pipunculus, I. 231.
Plagia, II. 16, 297, sp. 25.
Planetella, Wwd., IV. xv.
Planetes, Wlk., *v.* Planetella.
Platycephala, II. 223.

Platychirus, II. 284, 293, sp. 23, etc.
Platycnema, I. 224, 229.
Platypalpus, I. 88, 121.
Platypeza, I. 224.
Platyptera, Mg., I. 90, sp. 2.
Platypterygia, Steph., *v.* Platyptera.
Platystoma, II. 192, 193.
Platyura, IV. 7, 64.
Plaxemyia, II. 106, 111, sp. 13; IV. xiii.
Plectropus, I. 193.
Plesiastina, IV. 342.
Plesina, II. 15; IV. xiii.
Ploas, Steph., *v.* Phthiria.
Pocota, I. 258.
Polidea, Maeq., II. 29, sp. 24.
Pollenia, II. 106, 110, sp. 10.
Porphyrops, I. 149, 210; IV. xii.
Porphyrops, Mg., I. 193.
Porricondyla, IV. 61.
Posthon, IV. 262.
Prionomyia, IV. 208.
Procota, Ag. *v.* Pocota.
Proscna, II. 93.
Psalidomyia, II. 157.
Psarus, I. 237, 266.
Psila, II. 216, 219.
Psilocerus, IV. 193.
Psilomyia, II. 219.
Psilopa, IV. 344.
Psilopus, I. 149, 150.
Psilota, I. 237, 269; IV. xii.
Psychoda, IV. 254.
Pterocera, I. 260.
Ptilocera, II. 15.
Ptiolina, I. 63, 71.
Ptychoptera, IV. 269, 337.
Ptychopteryx, Leach, *v.* Ptychoptera.
Pulex, IV. I.
Pyrellia, II. 101, 112, sp. 15.

Ragas, I. 88, 102.
Reaumuria, Desv., II. 13, sp. 1.
Rhadiurgus, I. 50.
Rhagio, I. 64.
Rhamphidia, IV. 269, 308.
Rhamphina, II. 17.
Rhamphomyia, I. 88, 108.
Rhaphium, I. 149, 193.
Rhingia, I. 237, 278.
Rhinophora, II. 15, 289, sp. 17.
Rhipidia, IV. 269, 311.
Rhyphus, IV. 340, xv.
Rivellia, II. 195, 197, sp. 6.
Rœselia, II. 17, 19.
Rohrella, Desv., II. 124, sp. 17.
Ryphus, Ztt., *v.* Rhyphus.

Saccopteryx, IV. 261.
Salia, II. 16.
Saltella, II. 207, 213.
Salticella, II. 171.
Sapromyza, II. 187; IV. xiii.
Sarcophaga, II. 101.
Sargus, I. 10, 30.
Satyra, I. 154.
Scæva, I. 284.
Scaptomyza, II. 238.
Scatella, II. 259, 265; IV. 346.
Scatina, Desv., *v.* Scatophaga, p.
Scatomyza, II. 298.
Scatophaga, II. 149, 152.
Scatophaga, II. 219.
Scatops, Geof. (*Scatopse*), IV. 134, 140.
Scenopinus, I. 84.
Schœnomyza, II. 146.
Sciapus, I. 150.
Sciara, IV. 7, 50.
Sciodromia, I. 88, 107.
Sciomyza, II. 149, 158.
Sciophila, IV. 6, 35.
Scopolia, II. 19, 92, sp. 166.
Scyphella, IV. xiii.
Sejoptera, II. 195.
Senometopia, Mcq., *v.* Stenometopia.
Sepedon, II. 149, 169.
Sepsis, II. 207, 208.
Sericocera, II. 15, 94.
Sericomyia, I. 237, 262.
Serromyia, IV. 208.
Servillia, Desv., II. 21, sp. 5.
Siagona, Mg., *v.* Glochina.
Sicus, *Scop.*, II. 4.
Sicus, Latr., I. 138.
Simulium (*Simulia*), I. 146.
Siphona, II. 12.
Siphonella, Mcq., *v.* Madiza.
Sitarea, Desv., *v.* Trypeta, p.
Spania, I. 63, 72.
Spaniocera, IV. 73.
Sphærocera, II. 172.
Sphæromias, IV. 208.
Sphærophoria, I. 298.
Sphegina, I. 237, 301.
Sphenella, II. 198.
Spilogaster, II. 117, 130, sp. 36.
Spilomyia, Mg., I. 259, sp. 6.
Stegana, IV. xiv.
Stenometopia, II. 15, 25, sp. 14, etc.
Stenepteryx, II. 284, 288.
Stomoxys, II. 106, 116.
Stratiomys, I. 13; IV. xi.
Sturmia, II. 17.
Slygia, I. 79.
Stylidia, II. 291.
Styrex, I. 67.

Subula, I. 33, 34.
Suillia, II. 187.
Sybistroma, I. 149, 153.
Sycorax, IV. 254, 262.
Sylvia, II. 191, sp. 4.
Symmerus, IV. 63.
Symplecta, IV. 269, 278.
Syphona, *v.* Siphona.
Syritta, I. 237, 253.
Syrphus, I. 237, 284.
Syrphus, Fln., I. 242, 247.

Tabanus, I. 35, 36.
Tachina, II. 6, 14.
Tachydromia, I. 88, 138.
Tachydromia, Mg., I. 121.
Tachypeza, I. 139.
Tachytrechus, I. 173.
Tanyptera, IV. 333.
Tanypus, IV. 149, 195.
Teichomyza, *v.* Tichomyza.
Telmatobia, IV. 345.
Temnostoma, I. 256.
Tephritis, II. 198.
Terellia, II. 198.
Terenia, II. 187.
Tetanocera, II. 149, 165.
Tetanops, II. 171.
Tetanura, II. 215, 216.
Tethina, II. 240.
Tetragoneura, IV. 7, 43.
Thaumalea, IV. 263, 264.
Thelaira, II. 94.
Thelida, IV. xiii.
Themira, II. 207, 211.
Thereva, I. 73.
Thinophilus, I. 149, 190.
Thryptocera, *Mcq.*, II. 67, sp. 109.
Thyreophora, IV. xiii.
Tichomyza, II. 259, 267; IV. 346.
Timia, IV. xiii.
Tinearia, IV. 254.
Tipula, IV. 269, 318.
Tæchobates, I. 218.
Toxoneura, II. 187, 191, sp. 12.
Trennia, II. 126, sp. 23.
Trichina, I. 113.
Trichocera, IV. 270.
Trichocera, IV. 205.
Trichomyia, IV. 254, 261, xv.
Trichoptera, IV. 254.
Tricyphona, IV. 269, 282.
Trigonomctopus, IV. xiii.
Trimerina, II. 250, 252; IV. 344.
Trineura, II. 276.
Trixa, II. 100.
Tropidia, I. 237, 252.
Trupanea, II. 187.
Trypeta, II. 193, 198.
Tryphera, II. 17, 18.
Tyrophaga, II. 221.

Ula, IV. 269, 307, xvi.
Ulidia, II. 193, 194, sp. 2.
Ulomyia, IV. 254, 261.
Unomyia, *v.* Limnobia, p.
Urellia, II. 198.
Uromyia, *Mg.*, II. 10, sp. 2.
Urophora, II. 198.

Vappo, I. 26.
Volucella, I. 237, 260.
Volucella, I. 83.

Wiedemannia, Mg., II. 94.
Wiedemannia, Ztt., I. 88, 106; IV. xi.
Winthemia, II. 17.

Xiphidicera, I. 111.
Xiphura, IV. 333.
Xylophagus, I. 33.
Xylota, I. 237, 254.

Zenillia, Desv., *v.* Tachina, p.
Zodion, II. 3.
Zophomyia, II. 17, 18, 29, sp. 24.
Zygoneura, IV. 7, 57.

INSECTA BRITANNICA.

DIPTERA.

SUCTORIDEA.

Family I. PULICIDÆ.

The characters of *Suctoridea*, in Vol. I. p. 4 of this work, will also serve for the *Pulicidæ*, which is the only Family in that division.

Genus I. **PULEX.**

Pulex, L. S. N. ii. 1021 (1753); Latr.; Lea.; Dugès; Bouché; Newm. *Pulex* et *Ceratophyllus* aut *Ceratopsyllus*, Curt. *Pulex* et *Ischnopsyllus*, Westw.

Corpus compressum, coriaceum, nitens, setosum. Oculi parvi, rotundi, simplices. Mandibulæ setiformes, compressæ, marginibus serrulatis. Lingua nulla. Maxillæ parvæ, lamelliformes, coriaceæ, subtriangulares. Palpi maxillares 4-articulati. Labium parvum, membranaceum. Mentum minutum. Palpi labiales triarticulati. Antennæ 4-articulatæ; articulus quartus incisuris transversis. Abdomen segmentis septem. Pedes longi; postici saltatorii; coxæ magnæ; femora robusta; tibiæ setosæ; ungues validi.

Body compressed, hard, shining, setose. Eyes small, round, simple. Mandibles composed of two elongated, flattened setæ, with a central rib, and with the edges finely serrulated. Lingua obsolete. Maxillæ small, lamelliform, coriaceous, subtriangular. Maxillary palpi four-jointed, attached to the base of the maxillæ. Labium small, membranous. Mentum smaller than the labium. Labial palpi three-jointed, seated on the apex of the labium. Antennæ four-jointed; third joint very minute; fourth with transverse incisions, and apparently articulated. Prothorax, mesothorax, and metathorax short. Abdomen com-

79

posed of seven distinct segments. Legs long, the hind pair formed for leaping; coxæ large; femora stout; tibiæ setose; tarsi with two strong claws.

Very few insects are more generally known than the Flea; and for a more detailed history of it, the following authors may be especially consulted: — Leuwenhoeck, Rösel, De Geer, Latreille, Defrance, Dugès, Bouché, Strauss-Durckheim, Newman, and Westwood. The South American Chigoe or Jigger, *Pulex penetrans*, L. (genus *Sarcopsylla*, Westw.), is much more injurious, for it buries itself beneath the skin, and sometimes causes mortification. The eggs of the common flea are large, white, oval. The larvæ are long and vermiform, with thirteen segments; the head is rather longer than the other segments, and somewhat attenuated in front, and has two short one-jointed antennæ; the anal segment is furnished with two slightly curved appendages. They feed on animal matter, whether on the bodies of birds and beasts, or cast off. The pupa is inactive, and generally enclosed in a silken cocoon. The following specific descriptions are mostly translated from Bouché.

1. **irritans,** L. S. N. ii. 1021 (1753); F.; Gmel.; Scop.; Leach; Dugès; Bouché; Guér. *Piceo-fusca, capite nitente lævi sparse et subtiliter punctato, pedibus pallidioribus, femoribus posticis intus ciliatis, tarsorum anticorum articulo secundo posticorum primo longissimo.* Long. 1 lin.

THE COMMON FLEA.—*Abdomen above with two stout apical diverging bristles. Coxæ very broad, flat, with short bristles above. Femora equally broad, flat, somewhat thicker than the coxæ, with short hairs, fore pair with two stout apical bristles above, hind pair fringed with bristles on the inner side. Tibiæ and tarsi with stout apical spines. Ungues fringed beneath with little spines. The joints of the tarsi in relation to their comparative length have the following succession in the fore pair,* 2, 5, 1, 3, 4, *and in the hind pair,* 1, 5, 2, 3, 4.

Generally distributed. (E. S. I.)

2. **Canis,** St.; Dugès A. S. N. 163. 2. pl. 4. f. 2–5 (1832); Bouché; Steph.; Curt.—*terrestris?* Macq. *Pallide piceo-fusca, capite nudo nitente lævi sparse et subtiliter punctato, coxis et femoribus fere nudis, tarsorum anticorum articulo quinto posticorum primo longissimo.* Long. $\frac{4}{5}$ lin.

Resembles P. irritans, *but is smaller and paler, and has shorter legs; coxæ slightly bristly. Femora almost bare. Tibiæ thicker than in* P. irritans. *Joints of the fore tarsi in relation to their comparative length,* 5, 2, 1, 3, 4; *of the hind tarsi,* 1, 5, 2, 3, 4. *Ungues of the male broad, and fringed with black spines on both sides.*

Infests the dog and the fox. (E. S. I.)

3. **Gallinæ,** Schr. F. B. iii. 195 (1798); Bouché. *Piceo-fusca,*

ovata, capite nitente lævi longiusculo, prothorace nigro-costato, tarsorum omnium articulo primo longissimo. Long. $\frac{2}{3}$ lin.

Much smaller and more compact than P. irritans. *Antennæ almost lanceolate; last joint slender. Maxillary palpi slender, filiform. Legs much contracted, with bare femora, and with slightly spinose tibiæ and tarsi. Joints of all the tarsi in relation to their comparative length,* 1, 2, 5, 3, 4.

The larvæ resemble those of *P. irritans,* but are darker. The eggs are white, globose, and continue about fourteen days.

On hens, especially in their nests. (E. S. I.)

4. **Felis,** Bouché, Nov. Act. Acad. Cæs. xvii. 1. 505. 4 (1835). *Pallide piceo-fusca, capite nitente lævi postice punctato, facie subtus genisque ciliis nigro-spinulosis, prothorace nigro-costato, tibiis posticis apice dilatatis, tarsorum anticorum articulo quinto posticorum primo longissimo.* Long. $\frac{4}{5}$ lin.

Almost as large as P. irritans. *The whole of the face beneath and the genæ fringed with little black spines, which, in the last, have a lateral direction. Fore coxæ altogether coarsely punctured. Femora bare, hind pair fringed on the inner side with long bristles. Tibiæ and tarsi spinose. Joints of the fore tarsi in relation to their comparative length,* 5, 2, 1, 3, 4; *of the hind tarsi,* 1, 2, 5, 3, 4.

Infests the cat. (E. S. I.)

5. **Martis,** Bouché, Nov. Act. Acad. Cæs. xviii. 1. 506. 5 (1835). *Piceo-fusca, capite lævi nitente nudo, genis spinulis nigris ciliatis, prothorace nigro-costato, tibiis apice dilatatis, tarsorum anticorum articulo quinto posticorum primo longissimo.* Long. $\frac{4}{5}$ lin.

Darker than P. Felis, *which it much resembles, and the joints of the tarsi have the same comparative length; the clypeus is without spines, and the body is not so thickly covered with bristles as in that species. Fore coxæ coarsely punctured; femora bare, the hind pair fringed with bristles; tibiæ and tarsi with stout spines.*

Infests martens and dogs. (E.)

6. **Sciurorum,** Olf. Comm. 48 (1816); Schr.; Bouché. *Pallide piceo-fusca, nitens, lævis, capite nudo, prothorace nigro-costato, abdominis lateribus nudis, tarsorum articulo primo longissimo.* Long. $1\frac{1}{6}$ lin.

Somewhat larger and more elongated than P. irritans. *Body smooth, shining. Head bare. Antennæ pale yellow, short, obconical. Prothorax ribbed. Mesothorax almost bare. Femora bare, contracted. Fore tarsi without spines. Hind tarsi shorter than in the other species. Joints of the fore tarsi in relation to their comparative length,* 1, 5, 2, 3, 4; *of the hind tarsi,* 1, 2, 3, 5, 4. *Ungues straight, and so close together as to be apparently but one; the middle pair somewhat thickened.*

Infests the squirrel. (E. S. I.)

7. **Erinacei,** Leach; Bouché, Nov. Act. Acad. Cæs. xvii. 1. 507. 7 (1835). *Pallide piceo-fusca, capite nitente lævi, antice nudo, postice*

punctato et setoso, metathorace nigro-costato supra sulcis latioribus, tarsorum anticorum articulo quinto posticorum primo longissimo. Long. 1 lin.

As large as P. irritans. *Each eye beneath with two downward-pointing bristles. Hind border of the mesothorax fringed with little spines, which appear like black ribs on the metathorax. Fore coxæ large, coarsely punctured, and, like the others, beset with a few bristles. Femora bare. Tibiæ and tarsi, the hinder especially, bristly. Joints of the fore tarsi in relation to their length,* 5, 2, 1, 3, 4; *of the hind tarsi,* 1, 2, 5, 3, 4.

Infests the hedgehog. (E. S. I.)

8. **Talpæ** (Sam. Comp. 1. 35) Curt.! B. E. pl. 114 (1826); Bouché.—*fasciatus,* Latr.; Rose. *Fusco-flava, capite nitente setoso, antennis fusiformibus, prothorace costato nigro, coxis anticis spinosis, tarsorum omnium articulo primo longissimo.* Long. $\frac{3}{4}$–1 lin.

Legs dark. Joints of the fore tarsi in reference to their length, 1, 5, 2, 3, 4; *of the hind tarsi,* 1, 2, 5, 3, 4. *Hind metatarsi very long and thick.* Fem. *Apical abdominal segment extended on each side, and so forming two vertical semicircular discs.*

Infests the mole. (E. S. I.)

9. **Musculi,** Dugès, A. S. N. xxvii. 163. 3. pl. 4. f. 3. 10 (1832); Bouché.—*Muris,* Curt.

Fusco-flava, antice attenuata, capite punctato setoso, temporibus spinulis nonnullis abbreviatis ciliatis, prothorace costato, femoribus arcuatis, tarsorum anticorum articulo quinto, posticorum primo longissimo. Long. $\frac{4}{5}$ lin.

Body much attenuated in front. Head wholly clothed with short bristles; temples with some short, small black spines. Legs almost without spines; femora and fore tibiæ curved; the latter fringed with black bristles; fore coxæ coarsely punctured with black bristles. Joints of the fore tarsi with reference to their length, 5, 2, 1, 3, 4; *of the hind tarsi,* 1, 2, 3, 5, 4. *Fore ungues incrassated.*

Infests the common mouse. (E. S. I.)

10. **Vespertilionis,** Sam.; Dugès, A. S. N. xxvii. 164. 4. pl. 4. f. 4 (1832); Bouché; Steph.; Curt.—*elongatus,* Curt.! B. E. pl. 417. —*trifasciatus,* Curt. *Fusco-flava, antice valde attenuata, capite longo setis postice incumbentibus, prothorace abdominisque segmentis primo secundo quinto sexto et septimo nigro-costatis, pedibus gracilibus, tarsorum omnium articulo primo longissimo.* Long. $\frac{3}{4}$ lin.

Body much attenuated in front. Head long, pointed. Antennæ fusiform. Genæ with two black conical little spines on each side. Legs long, slender, pale yellow, with black articulations. Joints of all the tarsi with reference to their length, 1, 2, 3, 5, 4.

Infests the bat. (E. S. I.)

11. **Fringillæ,** Steph. MSS. *Parva, brevis, lata, testacea, nitens, supra nigricans,* P. Hirundinis minor et brevior, *pedibus gracilioribus minusque setosis.* Long. 1 lin.

Body small, rather short and deep, testaceous, shining blackish above; smaller and shorter than P. Hirundinis, *and with more slender and less bristly legs.*

Infests the nests of the sparrow. (E. S. I.)

12. **Hirundinis,** Steph.; Sam. Ent. Comp. 1. 35; Curt. *Testacea, subelongata, antennis abbreviatis, thoracis fascia postica nigra, abdominis apice subsetoso, pedibus setosis.* Long. $1\frac{1}{4}$ lin.

Testaceous, slightly elongated. Antennæ short. Thorax with a black band on the hinder part. Abdomen slightly setose at the tip. Legs setose; joints of the tarsi from the first to the fourth successively decreasing in length; fifth longer than the third.

Infests the swallow. (E. S. I.)

13. **Columbæ,** Steph. Syst. Cat. ii. 328. 9315. 10; Curt. *Testacea, valde elongata, antice attenuata, fasciis* 5 *aut* 6 *nigris, abdominis apice pedibusque subsetosis.* Long. $1\frac{1}{4}$ lin.

Body testaceous, much elongated, attenuated in front, with five or six slight black bands. Antennæ of moderate length. Tip of the abdomen and legs slightly setose; joints of the hind tarsi from the first to the fourth successively decreasing in length.

Infests the pigeon. (E. S. I.)

14. **Melis,** Leach, MSS. *Magna, testacea, sat longa, subpilosa, antennis sat longis, abdominis apice quadrisetoso, pedibus setosulis.* Long. $1\frac{1}{2}$ lin.

Large, testaceous, rather long, slightly hairy. Antennæ filiform, longer than the head; second joint longer than the first; third shorter than the second; fourth longer than the third. Abdomen with four bristles near the tip. Legs rather setose; joints of the tarsi from the first to the fourth successively decreasing in length.

Infests the badger. (E.)

NEMOCERA.

NEMOCERA, Latr.; Mcq.; Westw.; Zett.; Ross. (V.). *Tipulariæ,* Meig.; Lam.; Fall.; Rafinesque. *Sclerostoma* p., Dumr. *Tipulidæ,* Rond. *Tipulidii,* Bigot. *Aplocera* p., Dumr. *Tipulina* et *Culicina,* Newm. *Polymera,* Burm. *Culicina* et *Tipulariæ,* Agas.

This is the first group of the *Proboscidea,* which follow the *Suctoridea;* its characters are detailed in Vol. I. p. 5 of this work. It comprises ten families.

Family II. MYCETOPHILIDÆ.

Mycetophilidæ, Haliday, Ins. Dipt. Brit. 1. 7 (1851); Bigot. *Tipulariæ fungicolæ* p., Latr.; Meig.; Mcq. *Mycetophilites*, Newm. *Tipulidæ cecidomyides* p., et *T. Mycetophilides* p., Westw. *Mycetophilinæ* et *Sciarinæ*, Zett. *Sciophilinæ* et *Lestreminæ*, Rond.

Ocelli sæpissime duo aut tres. Pronotum inconspicuum. Mesonoti scutum indivisum. Areola discalis nulla.

Body generally small, elongated, nearly bare, often straightened in the middle. Head small. Eyes lateral, round or oval. *Ocelli two or three, rarely none.* Proboscis very generally short, long in *Gnoriste.* Palpi extended (retracted in *Corynocera*), incurved, cylindrical, with three or four joints, the first very short. Antennæ 10–16-jointed, porrect, simple, pectinated in *Platyroptilon.* Thorax convex. *Pronotum inconspicuous. Scutum of the mesothorax undivided. Wings* and halteres complete, none in *Epidapus; discal areolet wanting.* Abdomen often compressed, with seven segments, eight in *Corynocera. Legs* of moderate length, rarely long; *coxæ most often long;* tibiæ generally with spurs at the tips.

The *Mycetophilidæ* generally inhabit woods, and their larvæ mostly feed on decaying vegetable matter. The body is generally compressed; the legs formed for leaping; the coxæ long, and the tips of the tibiæ armed with spurs. The typical genus, *Mycetophila,* and especially *M. nigra,* has much resemblance to the *Pulicidæ,* whilst the last genus, *Bolitophila,* is closely allied to the *Tipulidæ,* by means of *Dixa* and *Trichocera.*

The genera may be arranged according to the following synopsis:—

a. Tibiæ armed with spines.
  b. Mouth not produced.
    c. Abdomen compressed.
      d. Antennæ rather slender, of moderate length. 1. Mycetophila.
      d d. Antennæ short, stout.
        e. Subapical and subanal veins simple. 3. Azana.
        e e. Subapical and subanal veins forked. 2. Cordyla.
    c c. Abdomen not compressed.
      d. Wings with one cubital areolet.
        e. Subcostal vein short. 4. Leia.
        e e. Subcostal vein rather long. 5. Boletina.
      d d. Wings with two cubital areolets.
        e. Middle ocellus very minute. 6. Sciophila.
        e e. Ocelli of nearly equal size. 7. Tetragoneura.
  b b. Mouth produced into a rostrum. 8. Asindulum.

a a. Tibiæ with extremely minute spines, or without spines.
b. With wings and halteres.
c. Cubital vein not forked.
d. Subanal vein forked.
e. Tibiæ with long spurs. 9. LEPTOMORPHUS.
e e. Tibiæ with very short spurs. 11. MYCETOBIA.
d d. Subanal vein not forked.
e. Hind tibiæ with very minute spines. 10. DIADOCIDIA.
e e. Hind tibiæ without any spines.
f. Antennæ fifteen- or sixteen-jointed in both sexes.
g. Fore fork of the subapical vein straight.
h. Antennæ bare, or nearly so. 12. SCIARA.
h h. Antennæ pilose, verticillate in the male. 15. LESTREMIA.
g g. Fore fork of the subapical vein much curved. 14. ZYGONEURA.
f f. Antennæ eleven-jointed. 16. CECIDOGONA.
f f f. Antennæ of the male sixteen-jointed, of the female ten-jointed. 17. CATOCHA.
f f f f. Antennæ nine-jointed. 18. ANARETE.
f f f f f. Antennæ fourteen- to fifteen-jointed. 19. CAMPYLOMYZA.
c c. Cubital vein forked.
d. Wings pubescent. 20. DITOMYIA.
d d. Wings not pubescent.
e. Antennæ short, stout. 21. PLATYURA.
e e. Antennæ long, slender.
f. Subcostal vein ending at much before half the length of the wing. 22. MACROCERA.
f f. Subcostal vein ending at about half the length of the wing. 23. BOLITOPHILA.
b b. No wings nor halteres. 13. EPIDAPUS.

Note. "I find, first, a group in which the præbrachial and pobrachial areolets are confluent, the præbrachial vein being faint or obsolete; second, a group in which the præbrachial areolet is entirely separated from the pobrachial by a distinct præbrachial vein, but the pobrachial is but open to the posterior margin, and not closed by a transverse vein.

"Of the first group, some (*Bolitophila*) have the pobrachial much shorter, so that the compounded areolet is irregular in form (so it is also in *Orphnephila*, in Fam. *Heteroclita*). The rest have the two brachial areolets conterminous, forming, united, one areolet, with a broad apex (*Macrocera, Mycetobia, Ditomyia, Diadocidia, Asindulum, Platyura,* and *Ceroplatus*). Of these, *Diadocidia* differs from all the rest, in having a simple cubital vein, instead of the forked one in the others; the forks in *Mycetobia* spring toge-

ther from the angle of the brachial areolet, but in the others form a petiolated fork, the anterior branch being very short, and nearly transverse, in *Platyura*, *Asindulum*, and *Ceroplatus*.

"In the second group most of the genera have the petiolate forked vein, which represents the subapical vein, and a second forked vein, the pobrachial with the subanal (the latter wanting in *Mycetophila nitida* and its affinities). *Sciophila* and *Tetragoneura* have a small areolet, closed by a transverse vein (wanting in the rest), which, though changed in position, appears analogous to the anterior branch of the cubital in *Platyura*, etc. *Lestremia* and the allied genera differ from *Sciara* chiefly by the origin of the subapical vein; the spurless tibiæ, shorter coxæ, and vacillating number of the joints of the antennæ, and evidently four-jointed palpi, approaching, as I think, to *Campylomyza*, in which the short coxæ of the fore pair do not touch the second pair, the subapical vein is simple, and the subanal springs from the pobrachial, very near the end, forming a short fork. *Catocha* is allied to *Lestremia*, but the difference of the veins is evident. With respect to *Epidapus*, the disappearance of the ocelli, with the wings and halteres, leaves fewer marks by which to collocate it, but the form of the abdomen, with the sixteen-jointed antennæ, place it near *Sciara*; the spurless tibiæ show an approach to *Lestremia*.

"The genera then may be grouped thus:—

- 1
  - 1 . . Bolitophila.
  - 2
    - Macrocera.
    - Mycetobia.
    - Diadocidia.
    - Ditomyia.
    - Ceroplatus.
    - Platyura.
    - Asindulum.
- 2
  - 1
    - 1 . . Cordyla.
    - 2
      - Mycetophila.
      - Boletina.
      - Leptomorphus.
      - Leia.
      - Tetragoneura.
      - Sciophila.
      - Sciara.
      - Zygoneura.
      - Epidapus.
    - 3
      - Lestremia.
      - Cecidogona.
      - Anarete.
      - Catocha.
  - 2 . . . . Campylomyza."

Haliday, MSS.

Genus I. **MYCETOPHILA.**

Mycetophila, Stæger, Dipt. Dan. (1840); Zett. D. S. *Sciara* p.,

Fabr. *Mycetophila* p., Meig.; Meq.; Curt.; Westw. *Mycetophila* p. et *Macquartia*, Zett. I. L.

Corpus sæpissime parvum, elongatum, pubescens, pallidum, fuscum, aut nigricans. Caput parvum, rotundatum, subtransversum, sessile, thorace humilius. Frons lata. Oculi ovati. *Ocelli tres*, quorum duo laterales remoti, *medius minimus*. Proboscis brevis. Palpi 4-articulati, incurvi, subfiliformes; articulus primus minutus; secundus, tertius, et quartus subæquales. Antennæ 16-articulatæ, filiformes aut subcylindricæ, subcompressæ, arcuatim porrectæ, corporis dimidio non longiores. Thorax ovatus, convexus. Metathorax declivis. Alæ mediocres, incumbentes; venæ subapicalis et subanalis sæpissime furcatæ. *Abdomen* segmentis 7, *plus minusve compressum*. Pedes mediocres; coxæ magnæ; femora compressa; tibiæ spinosæ, apice calcaratæ; tarsi longi, graciles. *Mas*. Abdomen subcylindricum, apice obtusum. *Fœm*. Abdomen plus compressum, apice acutum.

Body more or less small, elongated, pubescent, testaceous, yellowish, brown, or black. Head small, sessile, rounded, slightly transverse, lower than the thorax. Front broad. Eyes oval. *Ocelli* 3, *the middle one very minute*, the lateral pair remote. Proboscis short. Palpi four-jointed, curved downward, nearly filiform, having a considerable difference in some species; first joint minute, the rest nearly equal in size. Antennæ sixteen-jointed, filiform or nearly cylindrical, slightly compressed, setaceous or conical, and thick in some species, curved and porrect, not more than half the length of the body. Thorax oval, convex. Metathorax sloping. Wings of moderate length and breadth, incumbent, hyaline, occasionally spotted; radial vein straight, ending at before three-fourths of the length; cubital emitting the subapical at a little beyond the middle of the wing, near which it forms an angle at its junction with the præbrachial transverse, and is thence straight to the end, which is a little in front of the tip of the wing; the præbrachial transverse vein, and the radial before its junction therewith, close the præbrachial areolet, and are termed its veinlets in the following specific descriptions; subapical forked, fore fork ending at very little behind the tip of the wing; subanal generally forked, ending at about three-fourths of the length; anal varying as to length; humeral veinlet near the base; areolets generally 10—the humeral, the radial, the subcostal, the præbrachial, the pobrachial, the cubital, the subapical, one externo-medial, the anal, and the axillary; posterior margin forming a very obtuse angle at full twice the length of the humeral areolet from the base. Halteres distinct, rather short. *Abdomen* with seven segments, *more or less compressed*. Legs of moderate length; coxæ long; femora compressed; four hinder tibiæ spinose, with two spurs at the tips; fore tibiæ hardly spinose, with one spur at the tips; tarsi long, slender. *Male*. Abdomen nearly cylindrical; tip obtuse. *Fem*. Abdomen more compressed; tip acute.

The species of all the *Mycetophilidæ* are most distinguished by

the elongated coxæ and spurred tibiæ, and their movements are short, skipping, and abrupt, like those of other genera with similarly formed legs, such as *Pulex, Orchesia, Anaspis, Talitrus,* etc. The fore legs have comparatively short tibiæ and long tarsi, the hind legs long tibiæ and short tarsi.

The larva of *M. fusca* is vermiform; its head is small, with two short antennæ; there are two spiracles on the prothorax, and two on the seven basal joints of the abdomen. The larvæ of most species feed on *Fungi* or *Boleti,* and spin silken webs, within which they become pupæ. The species may be grouped thus:—

a. Tibiæ thickly beset with long, stout spurs.
  b. Subanal vein or pobrachial vein simple or entire. Species 1–4.
  b b. Subanal vein forked.
    c. Wings with a subapical band. Species 5–11.
    c c. Wings with no subapical band.
      d. Wings with a discal spot. Species 12–15.
      d d. Wings unspotted. Species 16–18.
a a. Tibiæ thinly beset with short slender spurs.
  b. Fork of the subanal vein very much nearer than the fork of the subapical to the base of the wing. Species 19–21.
  b b. Fork of the subanal vein much nearer than the fork of the subapical to the base of the wing. Species 22–24.
  b b b. Fork of the subanal vein a little nearer than the fork of the subapical to the base of the wing. Species 25–27.
  b b b b. Fork of the subanal vein very little nearer than the fork of the subapical to the base of the wing. Species 28, 29.
  b b b b b. Fork of the subanal vein hardly nearer than the fork of the subapical to the base of the wing. Species 30, 31.
  b b b b b b. Fork of the subapical vein as far as the fork of the subanal from the base of the wing. Species 32.
  b b b b b b b. Fork of the subapical vein a little nearer than the fork of the subanal to the base of the wing. Species 33.
  b b b b b b b b. Fork of the subapical vein very much nearer than the fork of the subanal to the base of the wing. Species 34–41.

In the eighteen following species the body is rather stout; the antennæ robust and compact, slightly setaceous, a little longer than the thorax; the legs are thick; the posterior tibiæ have very long spurs; and the hind tibiæ are armed on each side with long stout spines; the tarsi are comparatively short, and the posterior are thickly setose beneath. This group comprises nearly all the *Mycetophilæ* with spotted wings. The species from the first to the sixth have a simple subanal or pobrachial vein, and in the rest the subapical vein is very short before its fork, which is opposite, or nearly so, to the fork of the subanal.

1. **nigra,** Meig. Zw. i. 270. 23 (1818), vi. 304. 23 (1830); Meq.;

Zett.; Stæg.; Ross.—*nitida*, Meig.—*atra?* Meq. Nigra, palpis antennis basi halteribus pedibusque testaceis, *alis cinereis immaculatis*, femoribus posterioribus apice tarsisque nigris. Long. $\frac{3}{4}$–1; alar. $1\frac{1}{2}$–2 lin.

Black. Palpi testaceous. Antennæ sometimes testaceous at the base. *Wings grey;* veinlets of the præbrachial areolet forming an obtuse angle; the hind one about twice the length of the fore one, and nearly as long as the subapical vein before its fork; anal vein rather less than half the length of the subanal. Halteres testaceous. Legs testaceous; tarsi black; posterior femora with black tips; fore tibiæ a little longer than the fore metatarsi.

Note. Meigen, in his sixth volume, has corrected his previous erroneous description of this species.

Not rare in woods, from June to October. (E. S. I.)

2. **notata,** Stann. Observ. Spec. Mycetoph. 17, 18 (1831). Nigra, antennis basi pedibusque flavis, *alis macula media fusca*, femoribus posticis apice fuscis. Long. $\frac{3}{4}$–1; alar. $1\frac{1}{2}$–2 lin.

Black. Antennæ at the base and legs yellow. *Wings with a discal brown spot.* Hind femora with brown tips.

Not common. (E. I.)

3. **binotata,** Hal. MSS. Nigra, antennis basi pedibusque flavis, *alis macula media et fascia ante apicem fuscis.* Long. $\frac{3}{4}$–1; alar. $1\frac{1}{2}$–2 lin.

Black, with fine pale pubescence. First and second joints of the antennæ, and base of the third, dingy yellow. Thorax with brown hairs. *Wings* yellowish, hyaline, *with a brown middle spot* occupying the fork of the præbrachial vein and the median vein, *and a brown subapical band*, which is broader in front; veins brownish ferruginous. Legs dingy yellow; tibiæ with brown spurs, their lateral spines rather long, slender, black; tarsi with brownish tips; fore tarsi thrice the length of the tibiæ or upwards; fore metatarsus hardly shorter than the tibiæ; hind tarsi nearly longer by half than the tibiæ.

Rare. In Mr. Haliday's collection. (I.)

In the three preceding species, the head and the mesonotum form a continuous even curve.

4. **paludosa?** Stæg. Dipt. 265. 40 (1840); Zett. Nigro-cinerea, palpis halteribus pedibusque testaceis, *alis subcinereis, nebulis duabus subobsoletis, una discali, altera subapicali*, femoribus tibiisque apice tarsisque nigricantibus. Long. $1\frac{1}{4}$; alar. 2 lin.

Greyish-black. Palpi testaceous. Antennæ rather longer than the thorax. *Wings slightly greyish, very indistinctly clouded about the tip of the præbrachial areolet and near the tip of the costa;* veinlets of the præbrachial areolet forming an obtuse angle, the hind one twice the length of the fore one, and about half the length of the subapical vein before its fork; anal vein short. Halteres testaceous. Abdomen about twice the length of the thorax. Legs testaceous, stout; tarsi and tips of the femora and of the tibiæ blackish.

Note. The specimen here described has much resemblance to *M. nigra,* and may possibly not be *M. paludosa.*

Rare. (E.)

5. **pictipennis,** Stæg. D. D. 266. 41 (1840); Zett. Nigra, subnitens, *alis subcinereis maculis duabus diffusis fuscis apud marginem posticum connexis et pallidioribus,* halteribus pedibusque testaceis, tarsis nigricantibus. Long. 1; alar. 2 lin.

Black, slightly shining. Palpi and antennæ blackish. Thorax with tawny down. *Wings greyish, with a large brown spot by the præbrachial areolet, and another near the tip of the costa; these spots are connected in the disc of the wing, and extend thence in a paler band to the hind border;* veinlets of the præbrachial areolet forming an obtuse angle; the hind one about twice the length of the fore one, and as long as the subapical vein before its fork; anal vein short. Halteres testaceous. Legs dingy, testaceous; tarsi blackish.

Rare. (E.)

6. **rara,** Stæg. D. D. 266. 42 (1840); Zett. Nigro-fusca, palpis pedibusque fulvis, antennis fuscis basi fulvis, thorace maculis duabus fulvis, *alis subcinereis, maculis duabus subobsoletis fuscescentibus,* halteribus albidis, tarsis fuscis. Long. $1\frac{1}{4}$–$1\frac{1}{2}$; alar. $2\frac{1}{2}$–3 lin.

Blackish-brown. Palpi tawny. Antennæ brown, not longer than the thorax, tawny at the base. Thorax slightly clothed with pale tomentum; a tawny spot on each side in front. *Wings very slightly greyish, with a large, indistinct, brownish, subapical, costal spot; transverse veinlets of the præbrachial areolet very slightly clouded with brown,* forming a very obtuse angle; the hind one about twice the length of the fore one, and nearly as long as the subapical vein before its fork; anal vein about half the length of the subanal. Halteres whitish. Legs tawny; tarsi brown; fore tibiæ hardly longer than the fore metatarsi.

Rare. (E.)

7. **bimaculata,** F. S. A. 59. 12 (1805); Stæg.; Zett. D. S.—*biusta,* Meig.—*arcuata* p., Zett. I. L.—*pictula?* Meig. *Nigro-fusca,* palpis, thoracis vittis duabus, halteribus, ventre, segmentorum marginibus posticis pedibusque testaceis, antennis basi fulvis, *alis subcinereis macula discali fasciaque subapicali obscuris, apicibus cinereis,* tarsis fuscis. Long. 2–$2\frac{1}{2}$; alar. 4–5 lin.

Blackish-brown, thinly clothed with pale down. Palpi testaceous. Antennæ blackish-brown, tawny at the base. Thorax very stout, on each side with a testaceous stripe, which is dilated in front. *Wings slightly greyish, with a brown spot, which extends from the costa to the præbrachial areolet, and at three-fourths of the length with a grey band, which is brown in front; tips grey;* veinlets of the præbrachial areolet forming a very obtuse angle; the hind one about twice the length of the fore one, and of the subapical vein before its fork; subanal vein forked

at a little beyond the fork of the subapical; anal vein extending far beyond the fork of the subanal. Halteres testaceous. Abdomen testaceous beneath and along the hind borders of the segments. Legs testaceous; tarsi brown; fore tibiæ as long as the fore metatarsi.

Not common. (E. I.)

In the two following species, the veinlets of the præbrachial areolet form a slightly obtuse angle; the hind one is more than twice the length of the fore one, and of the subapical vein before its fork. Subanal vein forked at very little before the fork of the subapical. Anal vein not extending beyond the fork of the subanal.

8. **lutescens,** Zett. D. Sc. xi. 4178. 3 (1852). *Fulva,* antennis fuscescentibus basi fulvis, pectore halteribus pedibusque testaceis, *alis subcinereis ad costam fulvescentibus macula discali fasciaque subapicali fuscis,* abdomine fusco apice fulvo, segmentorum marginibus posticis albidis, tibiis tarsisque ferrugineis. Long. 2–2½; alar. 4–5 lin.

Tawny. Antennæ brownish, tawny at the base. Pectus testaceous. *Wings slightly greyish, somewhat tawny in front, with a brown undulating subapical band, which does not extend to the hind border, and with a brown spot on the tip of the præbrachial areolet and of the fork of the subapical vein.* Halteres testaceous. Abdomen brown; hind borders of the segments whitish; tips tawny. Legs ferruginous; coxæ and femora testaceous; fore tibiæ hardly longer that the fore metatarsi.

Not common. (E.)

9. **cingulum?** Meig. Zw. vi. 299. 34 (1830); Stann. *Testacea,* antennis fulvis, *alis subfulvescentibus macula discali fasciaque subapicali fuscis,* abdomine fulvo fasciis testaceis, femoribus posterioribus tarsisque apice fuscis. Long. 2½; alar. 5 lin.

Testaceous. Antennæ tawny, testaceous at the base. *Wings with a slight tawny tinge, which is most apparent in front, with a brown spot on the tip of the præbrachial areolet, and of the fork of the subapical vein, and at three-fourths of the length with a brown oblique band, which is interrupted between the subapical and subanal veins, and does not extend to the border.* Abdomen tawny above, with the exception of the hind borders of the segments. Tarsi brownish towards the tips; posterior femora with brown tips; fore tibiæ much longer than the fore metatarsi.

Not common. (E. I.)

10. **lunata,** F. S. A. 58. 6 (1805); Meig.; Mcq.; Zett.; Stæg.; R.—*arcuata,* Meig.—*signata,* Meig.; Stann.—*distigma,* Meig. *Fulva,* antennis nigricantibus basi fulvis, thoracis disco nigricante bivittato, *alis subcinereis fusco bimaculatis,* abdomine nigro marginibus posticis apiceque fulvis, pedibus testaceis, femoribus posticis apice tarsisque fuscis. Long. 1½–2; alar. 3–4 lin.

Tawny. Antennæ blackish, tawny towards the base. Disc of the

thorax blackish, with two parallel tawny stripes. *Wings slightly greyish, with a tawny tinge in front; a brown spot on the tip of the præbrachial areolet and of the fork of the subapical vein, and another adjoining the costa at three-fourths of the length;* veinlets of the præbrachial areolet forming a slightly obtuse angle; the hind one twice the length of the fore one, and more than twice the length of the subapical vein before its fork; subapical and subanal veins forked at an equal distance from the base of the wing; anal vein not extending to the fork of the subanal. Abdomen black above; hind borders of the segments and tip tawny. Legs testaceous; tarsi brownish; tips of the hind femora brown; fore tibiæ a little longer than the fore metatarsi.

Generally distributed. "The larva is gregarious in the growing stems of hollow-stalked Agarics; and spins, for its transformation, a long pouch of white silk, with a flat circular lid."—*Haliday.* (E. S. I.)

11. **fuscicornis,** Meig. Zw. i. 261. 2 (1818); Zett. I. L. D. S.; Stann.; Stæg.—*præusta,* Meig.; Zett. I. L. *Nigro-fusca,* palpis testaceis, antennis basi fulvis, thorace antico fulvo maculis tribus nigrofuscis, *alis subcinereis* fusco bimaculatis, ventre albo tomentoso, pedibus testaceis, femoribus tibiisque apice tarsisque fuscescentibus. Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Blackish-brown. Palpi testaceous. Antennæ tawny at the base. Thorax tawny in front, with three blackish-brown spots; the middle one in advance. *Wings greyish, with two brown spots, the first on the tip of the præbrachial areolet and of the fork of the subapical vein, the other at two-thirds of the length and adjoining the costa;* veinlets of the præbrachial areolet forming an obtuse angle, the hind one twice the length of the fore one, and more than twice the length of the subapical vein before its fork; subanal vein forked at a little distance beyond the fork of the subapical; anal vein not extending near to the fork of the subanal. Halteres whitish. Abdomen with white tomentum beneath. Legs testaceous; tarsi brownish; tips of the posterior femora and tibiæ brown; fore tibiæ much longer than the fore metatarsi.

Not rare. (E.)

12. **lineola,** Meig. Zw. i. 262. 4 (1818); Stann.—*ruficollis,* Meg.; Meig.; Mcq.; Zett.; Rs.—*centralis,* Meig.; Stæg.—*lurida?* Meig. *Nigro-fusca,* abdominis marginibus *pedibusque testaceis, capite* antennisque basi fulvis, palpis halteribus thorace vittis duabus fulvis, *alis subcinereis, macula discali fusca.* Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Blackish-brown. Head tawny. Palpi testaceous. Antennæ tawny at the base. Thorax on each side with a tawny stripe, which is dilated in front. *Wings greyish, with a brown spot on the tip of the præbrachial areolet and of the fork of the subapical vein;* veinlets of the præbrachial areolet forming a nearly right angle, the hind one less than twice the length of the fore one, which is hardly shorter than the subapical vein before its fork; subanal vein forked at hardly beyond the fork of

the subapical vein; anal vein not extending to the fork of the subanal. Halteres testaceous. Abdomen with testaceous bands on the hind borders of the segments, clothed beneath with whitish tomentum. *Legs testaceous;* tarsi darker than the tibiæ; fore tibiæ much longer than the fore metatarsi.

Common. (E. S. I.)

13. **stolida,** n. *Nigro-fusca,* antennis basi, palpis thoracis marginibus pectoreque fulvis, *alis cinereis macula discali subfusca,* halteribus testaceis, *pedibus fulvis* validis, *femoribus posticis apice tarsisque nigricantibus.* Long. $1\frac{3}{4}$; alar. $3\frac{1}{2}$ lin.

Blackish-brown. Palpi tawny. Antennæ not longer than the thorax, tawny at the base. Thorax clothed with pale down, tawny in front, on each side, and beneath. *Wings grey; transverse veinlets of the præbrachial areolet slightly clouded with brown;* veinlets of the præbrachial areolet forming an obtuse angle, the hind one longer than the fore one, and full twice the length of the subapical vein before its fork; fork of the subanal vein further than the fork of the subapical from the base of the wing; anal vein not extending near to the fork of the subanal. Halteres testaceous. *Legs tawny,* short, stout. *Tarsi blackish; hind femora with black tips;* fore tibiæ longer than the fore metatarsi.

Rare. (E.)

14. **uninotata?** Zett. D. S. xi. 4199. 20 (1852). *Nigro-fusca,* palpis testaceis, antennis basi *thoraceque fulvis, alis subcinereis macula discali fusca,* halteribus *pedibus*que *testaceis, tarsis fuscis.* Long. $1\frac{1}{4}$; alar. $2\frac{1}{2}$ lin.

Blackish-brown. Palpi testaceous. Antennæ tawny at the base. *Thorax tawny. Wings greyish, with a brown spot on the tip of the præbrachial areolet;* veinlets of the præbrachial areolet forming an obtuse angle; the hind one less than twice the length of the fore one, which is fully as long as the subapical vein before its fork; subanal vein forked at beyond the fork of the subapical vein; anal vein not extending near to the fork of the subanal. Halteres testaceous. *Legs testaceous; tarsi brown;* fore tibiæ a little longer than the fore metatarsi.

Rare. (E.)

15. **nigritula,** n. *Nigra,* palpis testaceis, antennis basi thorace antico *pedibusque fulvis, alis subcinereis macula discali fusca,* halteribus testaceis, *tarsis fuscescentibus.* Long. $1-1\frac{1}{4}$; alar. $2-2\frac{1}{2}$ lin.

Black. Palpi testaceous. Antennæ tawny at the base. Thorax tawny in front. *Wings greyish, with a brown spot on the tip of the præbrachial areolet, and of the fork of the subapical vein;* veinlets of the præbrachial areolet forming a very slightly obtuse angle, the fore one nearly as long as the hind one, and as long as the subapical vein before its fork; subanal and subapical veins forked at about an equal distance from the base of the wing; anal vein not extending near to the fork of

the subanal vein. Halteres testaceous. *Legs tawny, brownish;* fore tibiæ longer than the fore metatarsi.

Not rare. (E.)

16. **selecta,** n. *Nigra,* antennis basi palpisque testaceis, halteribus albis, alis fuscescentibus, venis optime determinatis, pedibus fulvis. Long. 2; alar. 3½ lin.

Black. Palpi testaceous. Antennæ testaceous at the base. Halteres whitish. Wings brownish; veins strongly marked; veinlets of the præbrachial areolet forming a slightly obtuse angle, the hind one about twice the length of the fore one, and longer than the subapical vein before its fork; fork of the subanal vein much nearer than the fork of the subapical to the base of the wing; anal vein extending nearly to the border. Legs tawny, stout, not long; spurs very long; hind femora thickly armed with long spines; *fore tibiæ hardly longer than the fore metatarsi.*

Rare. In the British Museum. (E.)

17. **striata,** F. S. A. 58. 5 (1805).—*punctata,* Meig.; Stann.; Meq.; Stæg.; Rs.; Zett. D. S.—*semicincta,* Meig.—*cunctans,* Wied.; Meig.; Mcq.; Zett. I. L.—*trivialis?* Meig.; Wiegm.—*rufa?* Mcq.; Meig. *Fulva,* thoracis disco maculis tribus ferrugineis, pectore halteribusque testaceis, alis subfulvescentibus, abdominis segmentis ferrugineo-fasciatis, tarsis fuscescentibus. Long. 2–2½; alar. 4–5 lin.

Tawny. Disc of the thorax with three large ferruginous spots, the middle one in advance. Pectus testaceous. Wings with a tawny tinge; veinlets of the præbrachial areolet forming a right angle, the fore one about half the length of the hind one, and nearly as long as the subapical vein before its fork; fork of the subanal vein a little nearer than the fork of the subapical to the base of the wing; anal vein not extending to the fork of the subanal. Halteres testaceous. Abdomen with ferruginous bands. Tarsi brownish; *fore tibiæ longer than the fore metatarsi.*

Common. (E. S. I.)

18. **unicolor,** Meig. Zw. vii. 43. 51 (1838). Ferruginea, antennis pedibusque concoloribus, alis pallide fulvis, tarsis fuscis. Long. 2; alar. 4 lin.

Ferruginous, as are also the antennæ and the legs. Wings pale tawny. Tarsi brown.

"In this species particularly, the palpi are shorter and stouter, the exterior joints not linear nor increasing in length, but obovate or spatulate."—*Haliday, MSS.*

Not rare. Has been found at Holywood, near Belfast, and at Blarney, Cork. In Mr. Haliday's collection. (I.) This species is unknown to me, and I am not certain whether it belongs to the preceding group.

The twenty-three following species form a group which is dis-

tinguished from the preceding by the less robust body and legs, and comparatively few short and slender spines of the hind tibiæ.

19. **maculosa,** Meig. Zw. i. 268. 18 (1818); Zett.; Stæg.; Rs. *Testacea,* vertice, antennis, *thoracis vittis tribus* abdomineque *ferrugineis,* hujus segmentis testacco-fasciatis, pedibus gracilibus, tarsis fuscis. Long. 2–3; alar. 4–5½ lin.

Testaceous. Vertex ferruginous. Antennæ ferruginous, testaceous at the base. *Thorax with three ferruginous stripes,* the middle one in advance, and divided longitudinally. Wings with a very slight tawny tinge; veinlets of the præbrachial areolet forming a slightly acute angle, the fore one much less than half the length of the hind one, and about half the length of the subapical vein before its fork; anal vein extending much beyond the fork of the subanal. Abdomen ferruginous; hind borders of the segments testaceous. *Legs* long, slender; spurs long; tarsi brown; hind tibiæ with very short spines; *fore tibiæ shorter than the fore metatarsi.*

Not rare. (E.)

20. **sericea,** Mcq. D. N. F. 95. 14 (1826).—*sericoma,* Meig. *Nigricans,* albido-tomentosa, palpis halteribus pedibusque testaceis, antennis basi *thoracisque maculis duabus anticis fulvis,* alis sublimpidis, pedibus longiusculis, tarsis fuscescentibus. Long. 1–1½; alar. 2–3 lin.

Blackish. Head and thorax with white tomentum. Palpi testaceous. Antennæ rather longer than the thorax, tawny towards the base. *Thorax with a tawny spot on each side in front.* Wings nearly limpid; veinlets of the præbrachial areolet forming a very slightly acute angle, the hind one full thrice the length of the fore one, and as long as the subapical vein before its fork; anal vein extending some little distance beyond the fork of the subanal. Halteres testaceous. Abdomen with a testaceous spot on each side before the middle. *Legs* testaceous, rather long; tarsi brownish; spurs long; hind tibiæ with very few spines; *fore tibiæ longer than the fore metatarsi.*

Common. (E. S. I.)

21. **fasciata,** Meig. Zw. i. 267. 16 (1815).—*discoidea,* Zett. D. S. —*maculosa* p., Zett. I. L. *Ferruginea,* subtus testacea, palpis, halteribus, abdominis fasciis apiceque testaceis, pedibus longis obscure testaceis, tarsis nigricantibus. Long. 1¾–2¼; alar. 3–4 lin.

Ferruginous, testaceous beneath. Palpi testaceous. Antennæ brownish, testaceous at the base. Wings slightly greyish; præbrachial areolet closed by two veinlets, which form a right angle, the hind one full six times the length of the fore one, and about thrice the length of the subapical vein before its fork, its hind branch curved; anal vein extending far beyond the fork of the subanal. Halteres testaceous. Abdomen with four testaceous bands on the fore borders of the segments; tip testaceous. *Legs* long, slender, darker testaceous; spurs long; tarsi blackish; hind tibiæ with a few minute spurs; *fore tibiæ much shorter than the fore metatarsi.*

Var. β. Thorax and abdomen blackish-brown; fore part of the thorax ferruginous. Abdomen black towards the tip; its testaceous bands narrower above.

Common. (E. S. I.)

22. **bicolor,** Mcq. D. i. 131. 14 (1834); Meig.; Stæg.; Zett. *Fusca,* palpis pectore halteribus pedibusque testaceis, antennis nigris, alis sublimpidis, tarsis fuscescentibus. Long. 1; alar. 2 lin.

Brown. Palpi testaceous. Antennæ black, stout, shorter than the thorax. Pectus testaceous. Wings nearly limpid; veinlets of the præbrachial areolet forming a right angle, the hind one about four times the length of the fore one, and a little shorter than the subapical vein before its fork; anal vein extending much beyond the fork of the subanal. Halteres testaceous. Legs testaceous; tarsi brownish; hind tibiæ with a few spines, their spurs long; *fore tibiæ full as long as the fore metatarsi.*

Not common. (E.)

23. **discoidea,** Meig. Zw. i. 263. 17 (1818); Mcq.; Stæg. *Nigra, subtus testacea,* antennis nonnunquam fuscis basi testaceis, alis limpidis aut subtestaceis, halteribus pedibusque testaceis, abdominis segmentis sæpe testaceo fasciatis, tarsis fuscis. Long. $1\frac{1}{4}$–$1\frac{1}{2}$; alar. 2–$2\frac{1}{2}$ lin.

Black, with hoary tomentum. Palpi testaceous. Antennæ rather stout, not longer than the thorax, testaceous for one-third of the length from the base. Thorax with a slight testaceous spot on each side in front. Wings limpid; veinlets of the præbrachial areolet forming a right angle, the hind one full thrice the length of the fore one, and as long as the subapical vein before its fork; anal vein extending to the fork of the subanal. Halteres testaceous. *Abdomen testaceous on each side, and beneath for two-thirds of the length from the base; tip testaceous.* Legs testaceous, rather stout; tibiæ darker than the femora; spurs very long; tarsi brown; hind tibiæ with a few minute spines; *fore tibiæ much longer than the fore metatarsi.*

Var. β. *Testaceous.* Head above and disc of the thorax greyish-black. Antennæ brown, as long as the thorax, testaceous at the base. Wings with a very slight testaceous tinge. Abdomen greyish-black, testaceous beneath and along the hind borders of the segments.

Not common. (E.)

24. **sciarina,** Meig. Zw. vi. 300. 40 (1830); Staun.; Stæg.; Zett. *Nigra,* cinereo-subtomentosa, alis subcinereis apice obscurioribus, halteribus pedibusque testaceis, tarsis fuscis. Long. $1\frac{1}{2}$–2; alar. $2\frac{3}{4}$ lin.

Black, slightly covered with grey tomentum, *darker at the tips.* Palpi and antennæ black, the latter twice the length of the thorax. Wings greyish; radial and cubital veins very distinct; subapical and subanal veins slight; veinlets of the præbrachial areolet forming an obtuse angle; the hind one is full twice the length of the fore one, and a little shorter than the subapical vein before its fork; anal vein

extending much beyond the fork of the subanal. Halteres testaceous. Legs testaceous; spurs rather short; tarsi brown; hind tibiæ with a few very short spines; *fore tibiæ very much longer than the fore metatarsi.*

Not rare. (E.)

25. **fenestralis,** Hoffm.; Meig. Zw. i. 265. 11 (1818); Stann. —*rufa,* Mcq.—*domestica,* Meig.; Rs.; Zett. Nigra aut fusco-ferruginea, vertice albo-tomentoso, palpis, antennis basi, pectore thoracisque lateribus, halteribus, abdominis fasciis basalibus, ventre pedibusque testaceis, alis subcinereis, tarsis fuscis. Long. $1\frac{1}{2}$; alar. $2\frac{1}{2}$ lin.

Black or brownish-ferruginous. Vertex with white tomentum. Palpi testaceous. Antennæ testaceous at the base. Pectus and sides of the thorax testaceous. Wings greyish; præbrachial areolet closed by two veinlets, which form an acute angle; the hind one nearly four times the length of the fore one, and a little longer than the subapical vein before its fork; anal vein very short. Halteres testaceous. Abdomen testaceous beneath, and with testaceous bands for half the length from the base; tip testaceous. Legs testaceous; tibiæ darker than the femora; spurs rather short; tarsi brown; hind tibiæ with very short spines; fore tibiæ a little shorter than the fore metatarsi. *Male.* Antennæ nearly twice the length of the thorax. *Fem.* Antennæ hardly longer than the thorax.

Common. (E. S. I.)

26. **ornaticollis,** Meg.; Meig. Zw. i. 269. 19 (1818); Mcq.; Stæg.; R.; Zett.—*grata?* Meig. *Testacea, albo-tomentosa, vertice* antennis *thoracisque disco nigro-fuscis,* alis subcinereis ad costam obsolete fulvescentibus, abdomine maculis dorsalibus trigonis nigro-fuscis, pedibus longiusculis, tarsis fuscescentibus. Long. $2\frac{1}{2}$–3; alar. 4–$4\frac{1}{2}$ lin.

Testaceous. Vertex of the head blackish-brown, with white tomentum. Antennæ blackish-brown, testaceous at the base. *Dorsal disc of the thorax blackish-brown; sides with white tomentum.* Wings slightly greyish, with an indistinct tawny tinge in front; veinlets of the præbrachial areolet forming a slightly acute angle; the hind one about thrice the length of the fore one, and nearly twice the length of the subapical vein before its fork; anal vein extending to the fork of the subanal. Abdomen with a large triangular blackish-brown spot on each dorsal segment. Legs rather long; spurs long; tarsi brownish; hind tibiæ with moderately long spines; *fore tibiæ very much shorter than the fore metatarsi.*

Common. (E. S. I.)

27. **sobria,** n. *Nigro-fusca, cano-subtomentosa,* palpis, halteribus, abdominis fasciis pedibusque testaceis, antennis basi thoracisque maculis duabus fulvis, alis subcinereis, femoribus apice basique fusco-maculatis, tarsis fuscescentibus. Long. $1\frac{3}{4}$–2; alar. 3–$3\frac{1}{2}$ lin.

Blackish-brown, with slight hoary tomentum. Palpi testaceous. Antennæ tawny at the base. *Thorax with a tawny spot on each side in*

front. Wings greyish; veinlets of the præbrachial areolet forming a nearly right angle; the hind one about thrice the length of the fore one, and as long as, or a little longer than the subapical vein before its fork; anal vein not extending so far as the fork of the subanal. Halteres testaceous. Hind borders of the abdominal segments testaceous. Legs testaceous; femora with a brown spot on each end; tibiæ darker than the femora; spurs long; tarsi brownish; hind tibiæ with short spines; *fore tibiæ as long as the fore metatarsi.*

Not common. (E.) This species much resembles *M. flavipes,* but may be distinguished by its shorter hind tibiæ.

28. **conformis,** n. *Nigro-cinerea,* palpis halteribus *abdominis maculis lateralibus* pedibusque *testaceis,* alis limpidis, femoribus tibiisque apice tarsisque nigris. Long. $1\frac{1}{4}$; alar. 2 lin.

Male *blackish-grey.* Palpi testaceous. Antennæ stout, very much longer than the thorax. Wings limpid; veinlets of the præbrachial areolet forming an obtuse angle, the hind one about twice the length of the fore one, and nearly as long as the subapical vein before its fork. Halteres pale testaceous. *Abdomen with testaceous spots on each side,* except at the tip. Legs testaceous; tarsi and tips of the femora and of the tibiæ black, stout; hind tibiæ with rather short spurs and very minute spines; *fore tibiæ longer than the fore metatarsi.*

Rare. (E.)

29. **crassicornis,** Stann. Observ. Spec. Mycetoph. 22. 20 (1831); —*punctipes,* Stæg.; Zett.—*spinicoxa,* Zett. *Nigricans,* albido-tomentosa, capite fulvo, palpis, antennis basi, *thoracis vittis duabus,* halteribus, *ventre* pedibusque *testaceis,* alis subcinereis, tibiis tarsisque fuscis. Long. $2-2\frac{1}{2}$; alar. $3\frac{1}{2}-4\frac{1}{2}$ lin.

Blackish. Head and thorax slightly covered with whitish tomentum. Head tawny. Palpi testaceous. Antennæ testaceous at the base. *Thorax on each side with a testaceous stripe,* which is broadest in front. Wings slightly greyish; veinlets of the præbrachial areolet forming a slightly acute angle, the hind one about twice the length of the fore one, and longer than the subapical vein before its fork; anal vein not quite extending to the fork of the subanal. Halteres testaceous. *Abdomen testaceous beneath for two-thirds of the length from the base; tip and hind borders of the segments also testaceous.* Legs testaceous, rather long; tibiæ and tarsi brown; spurs long; hind tibiæ with moderately long spines; *fore tibiæ much shorter than the fore metatarsi. Male.* Antennæ rather stout, a little longer than the thorax. *Fem.* Antennæ stout, lanceolate, a little shorter than the thorax.

Not rare. (E. I.)

30. **fuscula?** Zett. I. L. 864. 8 (1840). *Nigro-fusca,* palpis, antennis basi, halteribus pedibusque testaceis, alis subcinereis, tarsis fuscis. Long. $1-1\frac{1}{4}$; alar. $1\frac{1}{2}-2$ lin.

Blackish-brown. Palpi testaceous. Antennæ not longer than the thorax, testaceous at the base. Wings slightly greyish; veinlets of the

præbrachial areolet forming a hardly obtuse angle, the hind one nearly four times the length of the fore one, and as long as the subapical vein before its fork; anal vein extending to the fork of the subanal. Halteres testaceous. Legs testaceous; tarsi brown; hind tibiæ armed with short spines and with very long spurs; *fore tibiæ a little longer than the fore metatarsi.*

Not common. (E.)

31. **terminalis,** n. *Nigra,* pallido-tomentosa, palpis antennis basi pedibusque testaceis, alis subcinereis, halteribus albidis, tarsis fuscescentibus, femoribus posterioribus basi apiceque nigricantibus, tarsis fuscescentibus. Long. $1\frac{1}{4}$; alar. $2\frac{1}{2}$ lin.

Black, clothed with pale tomentum. Palpi testaceous. Antennæ not larger than the thorax, testaceous at the base. Wings slightly greyish; veinlets of the præbrachial areolet forming an obtuse angle, the hind one nearly twice the length of the fore one, and a little shorter than the subapical vein before its fork; anal vein not extending to the fork of the subanal. Halteres whitish. Legs testaceous; tarsi brownish; posterior femora blackish at the base and at the tips; hind tibiæ armed with short slender spines and with long spurs; *fore tibiæ fully as long as the fore metatarsi.*

Rare. (E.)

32. **finalis,** n. *Nigro-cinerea,* palpis, antennis basi, halteribus, *abdominis maculis trigonis lateralibus* pedibusque *testaceis,* antennis nigris robustis thorace longioribus, alis sublimpidis, pedibus validis, femoribus tibiisque apice tarsisque nigris. Long. $1\frac{1}{4}$; alar. 2 lin.

Greyish-black. Palpi testaceous. Antennæ black, stout, testaceous at the base, longer than the thorax. Wings nearly limpid; veinlets of the præbrachial areolet forming a very obtuse angle; the hind one much longer than the fore one, and about one-third of the length of the subapical vein before its fork; anal vein not extending to the fork of the subanal. Halteres pale testaceous. *Abdomen with lateral triangular testaceous spots.* Legs stout, testaceous; tarsi and tips of the femora and of the tibiæ black; hind tibiæ with very minute spines and rather long spurs; *fore tibiæ nearly twice the length of the fore metatarsi.*

Rare. (E.) This species may be said to connect *Leia* with *Mycetophila.*

33. **longicornis,** n. *Mas,* cinerea, vertice thoracisque lateribus albidis, antennis thorace duplo longioribus, alis subcinereis, abdominis maculis quatuor lateralibus apiceque testaceis, pedibus testaceis, tarsis nigricantibus. Long. $1\frac{3}{4}$; alar. $2\frac{1}{2}$ lin.

Male. Cinereous. Vertex and sides of the thorax whitish. Palpi testaceous. Antennæ blackish, testaceous at the base, about twice the length of the thorax. Wings very slightly greyish; veinlets of the præbrachial areolet forming a slightly obtuse angle, the hind one nearly four times the length of the fore one, and nearly twice the length of

the subapical vein before its fork; fork of the subapical vein as far from the base of the wing as the fork of the subanal; anal vein extending beyond the fork of the subanal. Abdomen long, slender; second and third segments with testaceous spots on each side; tip testaceous. Legs testaceous, long, slender; tarsi blackish; hind tibiæ with minute spines and long spurs; fore tibiæ a little shorter than the fore metatarsi.

Rare. (E.)

34. **indecisa,** n. Testacea, antennis, thoracis disco aut vittis tribus ferrugineis, alis subcinereis, abdomine ferrugineo, segmentorum marginibus posticis testaceis. Long. $2\frac{1}{2}$; alar. 4. lin.

Testaceous. Vertex ferruginous. Antennæ brown, testaceous towards the base. Thorax with a ferruginous disc or with three confluent ferruginous stripes. Wings greyish; veinlets of the præbrachial areolet forming a right angle, the hind one about five times the length of the fore one, and about twice the length of the subapical vein before its fork; fork of the subapical vein a little nearer than the fork of the subanal to the base of the wing; anal vein hardly reaching the fork of the subanal. Abdomen ferruginous; hind borders of the segments testaceous. Legs long, slender; trochanters and tarsi brown; fore tibiæ shorter than the fore metatarsi.

Rare. In the British Museum. (E.)

35. **fungorum,** Deg. Ins. vi. 361. 14. pl. 22. f. 1–13 (1783); Latr.—*fusca,* Meig.; Mcq.; Zett.; Stæg.; Rs. *Nigro-fusca,* palpis, antennis basi, halteribus pedibusque testaceis, *thoracis lateribus fulvis,* alis subcinereis, tarsis fuscis. Long. $2–2\frac{1}{2}$; alar. $2\frac{1}{2}–3\frac{1}{2}$.

Blackish-brown. Palpi testaceous. Antennæ slender, not longer than the thorax, testaceous at the base. *Thorax tawny on each side.* Wings slightly greyish; veinlets of the præbrachial areolet forming a slightly obtuse angle, the hind one about six times the length of the fore one, and about four times the length of the subapical vein before its fork; anal vein not extending to the fork of the subanal. Halteres testaceous. Legs testaceous, slender; tarsi brown; hind tibiæ with minute spines and very long spurs; *fore tibiæ shorter than the fore metatarsi.*

Common. (E. S. I.) The larva feeds on *Boletus luteus.*

36. **lateralis,** Meig. Zw. i. 266. 13 (1818); Mcq.; Zett. I. L.; Rs.—*guttiventris,* Meig.; Stann.; Stæg.; Zett. D. S.—*seriata,* Meig. *Nigro-fusca aut ferruginea,* subtus testacea, antennis basi, *thoracis lateribus,* halteribus, *abdominis maculis lateralibus trigonis,* pedibusque *testaceis,* antennis fuscis, tarsis fuscescentibus. Long. $1\frac{1}{4}–1\frac{3}{4}$; alar. 2–3 lin.

Blackish-brown or ferruginous, testaceous beneath. Antennæ brown, not longer than the thorax, testaceous at the base. *Thorax testaceous on each side.* Wings very slightly greyish; veinlets of the præbrachial areolet forming a slightly acute angle, the hind one about eight times the length of the fore one, and full thrice the length of the subapical

vein before its fork; anal vein not near extending to the fork of the subanal. Halteres testaceous. *Abdomen with five triangular testaceous spots on each side, the second and the third each forming a band above.* Legs testaceous, long, and slender; spurs long; tarsi brownish; hind tibiæ with short spines; *fore tibiæ a little shorter than the fore metatarsi.*

Common. (E. S. I.)

37. **leptura,** Meig. Zw. vi. 301. 42 (1830); Stæg.; Zett.—*cingulata?* Meig.; Mcq. *Testacea, vertice thoracisque disco piceis,* antennis tarsisque nigricantibus, alis subcinereis, *abdomine maculis trigonis dorsalibus fuscis fasciaque subapicali nigra.* Long. $2\frac{1}{4}$; alar. $2\frac{3}{4}$ lin.

Testaceous. Vertex and disc of the thorax piceous. Antennæ blackish, testaceous at the base, longer than the thorax. Wings slightly greyish; veinlets of the præbrachial areolet forming a slightly acute angle, the hind one more than four times the length of the fore one, and about twice the length of the subapical vein before its fork; anal vein not extending near to the fork of the subanal. *Abdomen* rather long, *with brown triangular dorsal spots, and with a broad black subapical band.* Legs long, slender; tarsi blackish; hind tibiæ with minute spines and rather long spurs; *fore tibiæ shorter than the fore metatarsi.*

Not rare. (E.)

38. **semifusca,** Meig. Zw. i. 267. 15 (1818). *Nigra, cinereo-tomentosa,* palpis, halteribus pedibusque testaceis, antennis basi fulvis, *thorace fulvo-bimaculato, alis* subcinereis *fusco-subnebulosis,* femoribus posticis apice tarsisque fuscis. Long. $1\frac{1}{4}$–$1\frac{1}{2}$; alar. 2–$2\frac{1}{2}$ lin.

Black, with grey tomentum. Palpi testaceous. Antennæ tawny at the base, not longer than the thorax. *Thorax with a tawny spot on each side in front. Wings* slightly greyish, a *little clouded with pale brown across the middle and at the tips;* veinlets of the præbrachial areolet forming a slightly obtuse angle, the hind one more than twice the length of the fore one, and shorter than the subapical vein before its fork; anal vein extending almost beyond the fork of the subanal. Halteres testaceous. Legs testaceous; tibiæ darker than the femora; spurs long; tarsi brown; hind femora with brown tips; hind tibiæ with very minute spines; *fore tibiæ longer than the fore metatarsi.*

Not common. (E.)

39. **diagonalis,** Hoffm.; Meig. Zw. i. 273. 29 (1818).—*dorsalis,* Stæg.; Zett. *Fulva,* antennis nigris basi fulvis, *thoracis vitta dorsali, abdominis marginibus posticis,* femoribus posticis apice tarsisque fuscis, alis subcinereis, halteribus testaceis. Long. $1\frac{1}{2}$; alar. 3 lin.

Tawny. Antennæ black, tawny at the base. *Thorax with a broad brown dorsal stripe.* Wings slightly greyish; veinlets of the præbrachial areolet forming a right angle, the hind one nearly four times the length of the fore one, and much longer than the subapical vein before its fork; anal vein not extending to the fork of the subanal. Halteres testaceous. *Abdomen with brown bands on the hind borders of the seg-*

ments; tibiæ darker than the femora; tarsi and tips of the hind femora brown; hind tibiæ with rather long spurs and very minute spines; *fore tibiæ much shorter than the fore metatarsi.*

Not common. (E.)

40. **tarsata?** Stæg. D. D. 264. 37 (1840); Zett. *Nigra*, palpis, antennis basi, *thoracis lateribus anticis, pectore*, halteribus pedibusque *testaceis*, alis cinerascentibus antice subtestaceis, pedibus validiusculis, femoribus tibiisque apice tarsisque fuscis. Long. 1; alar. 2 lin.

Black. Palpi testaceous. Antennæ testaceous at the base. *Thorax on each side in front and pectus testaceous.* Wings a little greyish, with a slight testaceous tinge in front; veinlets of the præbrachial areolet forming a slightly obtuse angle, the hind one full twice the length of the fore one, and nearly as long as the subapical vein before its fork; anal vein extending indistinctly to the fork of the subanal. Halteres testaceous. Legs testaceous, rather stout; tarsi and tips of the femora and of the tibiæ brown; hind tibiæ with long spurs and minute spines; *fore tibiæ a little shorter than the fore metatarsi.*

Rare. (E.)

41. **leioides,** n. *Pallide lutea*, antennis nigris, alis subcinereis, *abdominis fasciis basi apiceque nigris*, tarsis fuscis. Long. $1\frac{3}{4}$; alar. $3\frac{1}{2}$ lin.

Pale luteous, slightly pubescent. Palpi testaceous. Antennæ black, testaceous towards the base, not longer than the thorax. Wings slightly greyish; veinlets of the præbrachial areolet forming a hardly obtuse angle, the hind one full twice the length of the fore one, and as long as the subapical vein before its fork; anal vein extending to the fork of the subanal. Halteres whitish. *Abdomen with black bands above, wholly black at the base and towards the tip.* Legs rather stout; tarsi brown except towards the base; hind tibiæ with minute spines and rather long spurs; *fore tibiæ not shorter than the fore metatarsi.*

Rare. (E.)

The following additional species of this genus have been recorded as British:—

1. luctuosa, *Meig.* Zw. vi. 299. 35 (1830).
2. pusilla, *Meig.* Zw. vi. 300. 38 (1830).
3. lugens, *Wied.*, Meig. Zw. i. 269. 20 (1818).
4. analis, *Meg.*, Meig. Zw. i. 269. 21 (1818).
5. flavicaps, *Meig.* Zw. i. 270. 22 (1818).
6. pallida, *Stann.* Observ. Spec. Mycetoph. (1831).
7. interseeta, *Hoff.*, Meig. Zw. i. 271. 25 (1818).
8. flavipes, *Mcq.* Dipt. Nord. Fr. i. 36. 8.
9. pallidicornis, *Mcq.* Dipt. Nord. Fr. i. 36. 7.
10. pygmæa, *Mcq.* Dipt. Nord. Fr. i. 37. 10.

Genus II. **CORDYLA.**

CORDYLA, Meig. Zw. i. 274 (1818); Curt.; Zett. *Mycetophila* p.?, Curt. *Pachypalpus*, Mcq.; Zett.

Corpus angustum. Ocelli duo, minuti. *Palpi basi crassi. Antennæ incrassatæ, breves.* Alæ angustæ, breviusculæ. *Abdomen compressum. Pedes* sat breves; *tibiæ vix spinosæ.*

Body narrow. Ocelli two, minute, contiguous to the eyes. *Palpi thick at the base, short. Antennæ incrassated, short.* Wings narrow, rather short. *Abdomen compressed. Legs* somewhat short; *tibiæ hardly spinose, armed with rather long spurs.*

This genus much resembles *Mycetophila;* the veins of the wings have the same structure, and the species have the same habits. The sexes differ both in the form of their antennæ and the number of joints, which also varies according to the species.

1. **valida,** n. *Lutea,* crassa, alis subcinereis, pedibus validis, calcaribus sat longis, tarsis fuscescentibus. Long. 2; alar. 4 lin.

Luteous, stout, compact. Antennæ lanceolate, shorter than the thorax; joints short, transverse. Wings greyish, rather short; veins tawny; radial vein ending at before two-thirds of the length, cubital ending at beyond five-sixths of the length; veinlets of the præbrachial areolet forming an almost right angle, the hind one about six times the length of the fore one, and nearly half the length of the subapical vein before its fork; fork of the subanal vein very much nearer than the fork of the subapical to the base of the wing; anal vein extending to the fork of the subanal. Legs stout; spurs moderately long; tarsi brownish; hind tibiæ with very minute spines.

Rare. In the British Museum. (E.)

2. **flaviceps?** Stæg. D. D. 268. 2 (1840). *Nigricans,* palpis, antennis, *thoracis limbo, pectore* pedibusque *fulvis,* alis subcinereis, halteribus testaceis, tarsis nigris. Long. 1; alar. 2 lin.

Blackish. Palpi and antennæ tawny, the latter short, stout. *Thorax tawny in front, on each side, and beneath.* Wings very slightly greyish; veinlets of the præbrachial areolet forming an obtuse angle, the hind one full twice the length of the fore one, and about half the length of the subapical vein before its fork; fork of the subanal vein very much further than the fork of the subapical from the base of the wing; anal vein extending nearly to the fork of the subanal. Halteres testaceous. Legs tawny, short, stout; spurs very long; tarsi black; hind tibiæ with very minute spines; fore tibiæ much longer than the fore metatarsi.

Rare. (E. I.)

3. **fasciata?** Meig. Zw. vi. 304. 3 (1830).—*fulveola,* Hal.—*cinerea?* Zett. *Nigro-fusca, cinereo-tomentosa,* palpis, halteribus, *abdominis fasciis* femoribusque *testaceis,* antennis basi *thoracis*que *maculis duabus*

fulvis, alis subcinereis, pedibus fuscescentibus. Long. $1\frac{1}{4}$–$1\frac{1}{2}$ lin; alar. $2\frac{1}{2}$–3 lin.

Blackish-brown, with grey tomentum. Palpi testaceous. Antennæ incrassated, subfusiform, not more than half the length of the body, tawny at the base. *Thorax with a tawny spot on each side in front.* Wings greyish, very minutely pubescent; veinlets of the præbrachial areolet forming a slightly acute angle, the hind one much more than twice the length of the fore one, and much longer than the subapical vein before its fork; fork of the subanal vein hardly nearer than the fork of the subapical to the base of the wing; anal vein extending to the fork of the subanal. Halteres testaceous. *Hind borders of the abdominal segments testaceous.* Legs brownish, rather stout; coxæ and femora testaceous; hind tibiæ with long spurs and minute spines; fore tibiæ a little longer than the fore tarsi.

Not common. (E. I.)

Genus III. **AZANA,** n.

Mas. Caput parvum, thorace humilius. Palpi breves. *Antennæ validæ, compactæ, filiformes,* 16-articulatæ, *thorace non longiores.* Thorax convexus. *Alæ* sat latæ, mediocriter longæ; vena radialis costæ dimidium attingens, cubitalis fere ad alæ apicem producta, *subapicalis et subanalis simplices, non bene determinatæ.* Halteres longiusculi. *Abdomen compressum,* mediocriter longum.

Male. Head small, lower than the thorax. Palpi short. *Antennæ stout, compact, filiform,* sixteen-jointed, *not longer than the thorax.* Thorax convex. *Wings* rather broad, of moderate length; radial vein straight, ending at a little before half the length of the wing; cubital straight, springing from the base of the wing, united by a little transverse veinlet with the radial at one-sixth of the length, ending at five-sixths of the length; *subapical vein and subanal vein simple, secondary.* Halteres rather long. *Abdomen compressed,* of moderate length.

This genus is also nearly allied to *Mycetophila,* but is sufficiently distinguished by the veins of its wings.

1. **scatopsoides,** n. Nigra, alis subcinereis, halteribus fulvis apice nigris, pedibus piceis. Long. 1; alar. 2 lin.

Black. Wings greyish. Halteres tawny; knobs black. Legs piceous, stout, rather short; hind tibiæ with minute spines and rather long spurs; fore tibiæ much longer than the fore metatarsi.

Rare. (E.)

Genus IV. **LEIA.**

Leia, Meig. Zw. i. 253 (1818); Mcq.; Curt.; Zett. *Mycetophila* p., Meig. Kl. D.; Zw. vii.; Mcq.

Corpus sat latum, sublineare, nonnunquam nitens. *Ocelli tres, distincti.* Oculi ovati. Palpi 4-articulati. Antennæ filiformes, 16-articulatæ, corporis dimidio non longiores; vena subcostalis brevis, subapicalis furcata, subanalis sæpissime furcata. *Abdomen depressum, non compressum,* thorace duplo longius. Pedes mediocriter longi; tibiæ posticæ spinosæ.

Body moderately broad, nearly linear. *Ocelli three, distinct.* Eyes oval. Lip broad, somewhat bilobed. Palpi four-jointed; first joint globose; third elongate-clavate; fourth much longer, filiform. Antennæ sixteen-jointed, filiform, not more than half the length of the body. Thorax shining in some species. Wings rather narrow; subcostal vein slender, more or less short, joining the costal; radial ending before two-thirds of the length, united near its tip with the costal by a very short transverse veinlet; costal ending at a little in front of the tip; subapical and subanal forked, the latter simple in one species; anal distinct. Halteres rather short. *Abdomen depressed, not compressed,* about twice the length of the thorax. Legs of moderate length; tibiæ spurred, more or less spinose.

The habits of this genus are nearly similar to those of *Mycetophila,* from which it may easily be distinguished by the shape of the abdomen. The species may be thus grouped:—

a. Subanal vein forked.
  b. Tibiæ with stout spines. Species 1–6.
  b b. Tibiæ with short slender spines.
    c. Wings spotted. Species 7–8.
    c c. Wings not spotted.
      d. Face of the male with a spine. Species 9.
      d d. Face unarmed.
        e. Subapical and subanal veins strongly marked.
          f. Antennæ incrassated. Species 12, 13.
          f f. Antennæ not incrassated. Species 10, 11, 14.
        e e. Subapical and subanal veins slight. Species 15, 16.
a a. Subanal vein simple. Species 17.

1. **fascipennis,** Meg.; Meig. Zw. i. 255. 5 (1818); Meq.; Zett.; Stæg.; Rs.—*fasciola,* Meig.; Rs.; Zett.—*flavicornis,* Meig.—*consobrina,* Curt.—*crucigera,* Zett. I. L. *Lutea,* antennis fuscis, alis subtestaceis fascia subapicali cinerea, tarsis fuscescentibus. Long. 2–2¼; alar. 4–4½ lin.

Luteous, testaceous beneath. Antennæ brown, testaceous towards the base. *Wings* slightly testaceous, *with a grey subapical band;* subcostal vein rather short, united at some distance from its top to the cubital by a transverse veinlet; radial united with the cubital at some little distance from its tip; fork of the subanal vein much nearer than the base of the subapical to the base of the wing. Tarsi brownish.

Common, especially on the oak and on the lime-tree. (E. S. I.)

2. **pulchella,** Curt.! B. E. 645 (1837). *Ochracea,* antennis fuscis, *alis* flavescentibus, *macula costali apicali fusca, abdomine maculis fasciisque nigris,* femoribus posterioribus apice tarsisque nigricantibus. Long. 2; alar. 4 lin.

Bright ochreous, shining, finely pubescent. Vertex with a black spot. Antennæ brown, ochreous at the base. Metathorax with a brown spot. *Wings* yellowish, *with a long brown mark at the apex of the costa; first and second abdominal segments with a black spot on each; third, fourth, and fifth with a black ring on the margin; sixth and seventh glossy black.* Tarsi and tips of the hinder femora blackish; tibiæ brownish-ochre.

Rare; has been found by Mr. Curtis and Mr. Haliday on *Umbelliferæ,* near Killarney. (I.) In the collections of Mr. Curtis and Mr. Haliday.

3. **octomaculata,** Curt. B. E. 645 (1837). Ochracea, vertice antennisque fuscis, thoracis vittis tribus scutelloque nigris, alis fascia fusca arcuata subapicali, abdomine nigro maculis octo lateralibus ochraceis, femoribus posterioribus apice tarsisque nigris. Long. 2; alar. 4 lin.

Ochreous. Vertex brown. Antennæ brown, ochreous at the base. *Thorax with three black united stripes* not reaching the front. *Scutellum and abdomen black.* Wings with a lunate brown spot near the apex. *Second, third, fourth and fifth abdominal segments with an ochreous trigonate spot on each side of the base.* Tarsi and tips of hinder femora black; tibiæ dull ochreous.

Rare. In Mr. Curtis's collection. (E.)

4. **fumosa,** n. *Nigra,* capite subtus, palpis, pectore, thoracis marginibus vittaque dorsali testaceis, *alis fuscis,* halteribus coxis femoribusque testaceis, abdomine piceo. Long. $2\frac{1}{2}$; alar. 4 lin.

Black. Head beneath, palpi, pectus and borders of the thorax testaceous. Thorax with a testaceous dorsal stripe. *Wings brown;* veins black; subcostal vein about one-third of the length of the wing, united near its tip to the radial by a transverse veinlet; radial united to the cubital at some distance from its base; fork of the subanal much nearer than the base of the subapical to the base of the wing. Halteres testaceous. Abdomen piceous. Legs testaceous; tibiæ and tarsi black.

Rare. In the British Museum.

5. **bimaculata,** Meig. Kl.; Zw. i. 72. 7 (1804); Meq.; Stæg.; Rs.; Zett. *Nigra,* palpis, thoracis maculis duabus anticis, halteribus pedibusque testaceis, *alis* sublimpidis *fascia subapicali fuscescente,* abdomine ferrugineo fasciis nigris, coxis femoribusque nigro-notatis, tarsis nigris. Long. 2; alar. 4 lin.

Black. Palpi testaceous. Antennæ stout, testaceous towards the base. Thorax with a large testaceous spot on each side in front.

Wings nearly limpid, slightly greyish along the hind border, and *with a pale brownish subapical band;* subcostal vein very short, united near its tip to the radial by a transverse veinlet; radial vein united to the cubital rather near its tip; fork of the subanal vein a little nearer than the base of the subapical to the base of the wing. Halteres testaceous. Abdomen ferruginous; hind borders of the segments black. Legs testaceous; a black mark on each coxa and femur; tarsi black.

Not common. (E. I.)

6. **gilvipes,** Hal. MSS. "Nigra, albido-hirta, antennis nigro-fuscis, *alis obscure* hyalinis *immaculatis, vena mediastina abbreviata*, tarsis fuscescentibus. Long. $1\frac{1}{4}$; alar. $2\frac{2}{3}$ lin."—*Hal. MSS.*

"Black, clothed with whitish hairs. Ocelli three, almost in a line. Palpi yellow. Antennæ blackish-brown, rather thick; second joint with a long hair above. Wings obscurely hyaline, very finely pubescent; veins nearly like those of Sect. B *b*. Meig. Zw. i. pl. 9. f. 14; costal, subcostal, and cubito-radial veins brownish-ferruginous; the rest slender, almost colourless; cubital ending before the tip of the wing; subcostal as long as three-fourths of the cubital; connecting vein or radio-cubital vein upright, very short, opposite the middle of the subcostal vein, nearer than usual to the base of the wing; mediastinal vein straight, evanescent before the radio-cubital; præbrachial vein with a very short petiole and with long branches opposite the fork of the cubito-radial; costal vein extending towards the tip of the wing, beyond the end of the subcostal, as in *Tetragoneura*, to which this species is nearly alike in habit, and, if I am not mistaken, a variety has the connecting veinlet doubled in one wing, and thus forming a very minute areolet. Legs rather short and thick; tibiæ darker than the femora; posterior tibiæ with a rather thick row of minute spines; hind tibiæ with a few stouter spines; tarsi brownish."—*Hal. MSS.*

Rare. In Mr. Haliday's collection. (I.)

7. **Winthemii,** Lehm. Diss. 39 (1822); Meig.; Mcq.; Zett.; Stæg.; Rs. Testacea, antennis nigricantibus, thoracis vittis tribus abdominisque fasciis fuscis, alis limpidis interrupte trifasciatis, tarsis nigricantibus. Long. $2\frac{1}{2}$–$2\frac{3}{4}$; alar. 5–$5\frac{1}{2}$ lin.

Testaceous. Vertex ferruginous. Antennæ blackish, testaceous towards the base. Thorax with three brown stripes, the middle one divided, the lateral pair short. Wings limpid, with three imperfect and interrupted and occasionally almost obsolete grey bands; the first in the middle; the second sometimes entire, at three-fourths of the length; the third subapical; subcostal vein short, united near its tip to the radial by a transverse veinlet; radial united to the cubital at some little distance from its tip; fork of the subanal much nearer than the base of the subapical to the base of the wing. Abdomen with a black or brown band on the hind border of each segment. Tarsi blackish, except at the base; tips of the hind femora generally blackish.

Not rare in the autumn. (E.)

8. **trimaculata?** Mcq. H. N. D. i. 132. 18 (1831).—*picta?* Meig. "Lutea, antennis fuscis, thorace vittis duabus nigricantibus, alis hyalinis, maculis duabus et fascia ante apicem fuscis, abdomine fasciis dorsalibus fuscis, femoribus posticis apice summo tarsisque fuscis. Long. 2; alar. 4 lin."—*Hal. MSS.*

"It may possibly be a variety of *L. fasciola*, Meig., as Zetterstedt mentions the brownish cloud upon the second forked vein (but *not* the middle spot in the anterior fork).

"Lutcous. Vertex and front brownish-cinereous, clothed with long pale decumbent hairs. Ocelli three, in a line, the outer two near the eyes. Palpi pale, almost reaching the tips of the coxæ; the apical joints longer and more slender. Antennæ brown towards the base, beneath with the whole of the first and second joints ferruginous. Thorax slightly shining, clothed with pale hairs, and having two abbreviated dorsal blackish stripes. Wings hyaline, with a sinuated, brown, subapical band, which is broader in front; a brown spot extending between the præbrachial vein and the median transverse veinlet into the fork of the præbrachial vein; subanal vein, or hind branch of the pobrachial vein, bordered with brown; veins arranged like those of *L. Winthemi*, but the origin of the cubital vein is further from the tip of the radial vein, the brachial areolet is narrower, and the fork of the præbrachial vein is a little shorter, but that of the pobrachial is much longer. Halteres pale. Abdomen yellowish-green (lutescent when dried), brown above, excepting a narrow band on the base of each segment (or with six dorsal brown bands dilated in the middle). Legs pale yellow; hind femora with brown tips; tibiæ with yellowish spurs and with black spines; tarsi brown, yellowish at the base; fore tarsi thrice the length of the fore tibiæ."—*Hal. MSS.*

Rare. Found in September at Holywood, near Belfast, and at Blarney, Cork. In Mr. Haliday's collection. (I.)

9. **analis,** Meig. Zw. i. 257. 9 (1818).—*dubia*, Meig. Kl.; Zw.—*nasuta*, Hal. *Mas et Fœm.* Fusca, antennis basi pedibusque flavis, abdomine albido-piloso, trochanteribus nigris. Long. $2\frac{1}{3}$–3; alar. 5–$5\frac{1}{2}$ lin.

Male and Fem. Brown. Vertex with the three ocelli nearly in a line. Antennæ yellow at the base. Wing-veins as in *Mycetophila*, Div. D. Meig. Zw. i. pl. 9. f. 21. Abdomen with whitish hairs. Legs yellow; trochanters black. *Male.* Face armed with a deflected horn or spine.

Not uncommon about rivulets at Holywood, near Belfast. In the collection of Mr. Haliday. (I.)

10. **basalis,** n. *Atra*, alis cinereis, halteribus testaceis, *pedibus piceis, femoribus posticis extus testaceo-strigatis.* Long. $1\frac{1}{2}$; alar. $3\frac{1}{4}$ lin.

Deep black. Wings grey, darkest towards their tips; veins black; subcostal vein short, united to the radial at its tip; radial united to the cubital at a long distance from its tip; fork of the subapical vein

a little further than the fork of the subanal from the base of the wing. Halteres testaceous. *Legs piceous; hind femora with a testaceous streak on the outer side.*

Rare. (E.)

11. **infera,** n. *Nigra*, palpis halteribus *pedibus* abdominisque fasciis ventralibus *testaceis*, thorace vittis tribus cinereis, alis subcinereis, trochanteribus tarsisque nigricantibus. Long. $1\frac{3}{4}$; alar. $3\frac{1}{2}$ lin.

Black. Palpi testaceous. Thorax hairy, with three slight grey stripes. Wings greyish; subcostal vein about one-third of the length of the wing, united by a transverse veinlet to the radial near its tip; radial about three-fourths of the length of the wing, united to the cubital by a transverse veinlet, which is nearly opposite the tip of the subcostal; cubital joining the costal before the tip of the latter; fork of the subanal a little nearer than the fork of the subapical to the base of the wing. Halteres testaceous. Abdomen beneath with testaceous bands on the hind borders of the first, second, and third segments. *Legs testaceous;* trochanters and tarsi blackish.

Rare. (E.)

12. **crassicornis,** Curt. B. E. 645 (1837). Testacea, antennis luteis crassis, alis subcinereis ad costam subtestaceis, *halteribus fuscis basi testaceis.* Long. $1\frac{1}{2}$; alar. 3 lin.

Testaceous, linear, cylindrical. Antennæ luteous, thick. Wings slightly greyish, with a testaceous tinge along two-thirds of the costa. *Halteres brown, testaceous towards the base.* Posterior tibiæ with long spurs; hind tibiæ with very minute spines.

Rare. In Mr. Curtis's collection. (E.)

13. **helvola,** Hal. MSS. *Mas et Fœm.* "*Testacea*, haud nitida, subtilissime fusco-pubescens, fronte cinerascente, ocellis 3 in linea, alis flavido-hyalinis, *halteribus albidis*, tibiis vix subtilissime spinulosis, tarsis subfuscis. Long. $1\frac{3}{4}$; alar. $3\frac{1}{2}$ lin.

Testaceous, not shining, with fine brown pubescence; front cinereous. Ocelli three, in a line. Antennæ thick, compressed, wholly testaceous or ferruginous. Wings yellowish-hyaline; subcostal vein rudimentary; fork of the pobrachial vein much longer or nearer to the base of the wing than that of the præbrachial vein; cubital vein rather indistinct at its origin. *Halteres whitish.* Tibiæ hardly spinulose, their spines black; tarsi brownish. *Male.* Antennæ a little shorter than the thorax. *Fem.* Antennæ hardly half the length of the thorax; joints coarctate, very short, hardly to be distinguished."—*Hal. MSS.*

Very rare; has been found at Holywood, near Belfast. In Mr. Haliday's collection. (I.)

14. **parallela,** n. *Fulva*, antennis *thoracis*que *vittis tribus nigris*, alis subcinereis, abdomine fusco fasciis testaceis, pedibus testaceis, tarsis fuscis. Long. $1\frac{3}{4}$; alar. $3\frac{1}{2}$ lin.

Tawny. Antennæ black, a little longer than the thorax, tawny at

the base. *Thorax with three black stripes*, the middle one in advance of the others. Pectus testaceous. Wings greyish; veinlets of the præbrachial areolet forming an obtuse angle, the hind one full twice the length of the fore one, and as long as the subapical vein before its fork; fork of the subanal vein a little nearer than the fork of the subapical to the base of the wing; anal vein extending beyond the fork of the subanal. Halteres testaceous. Abdomen brown, with a testaceous band on the hind border of each segment. Legs testaceous; tarsi brown; hind tibiæ armed with minute spines and with long spurs.

Rare. (E.)

15. **pubescens,** Walk. E. M. iv. 115 (1837). *Nigra*, cinereo-tomentosa, palpis, halteribus pedibusque testaceis, alis limpidis apice subcinereis, tarsis apices versus nigricantibus. Long. $1\frac{1}{2}$; alar. 3 lin.

Black, with hoary tomentum. Palpi testaceous. Antennæ a little longer than the thorax. Wings limpid, with greyish tips; subcostal vein short, united to the radial at its tip; radial joining the costal at less than two-thirds of the length of the wing, united to the cubital by a transverse veinlet which is nearly opposite the fork of the subapical; cubital united to the costal at some distance from the tip of the latter; fork of the subanal a little nearer than the fork of the subapical to the base of the wing. Halteres testaceous. Legs testaceous; tarsi blackish towards the tips.

Not rare. (E.)

16. **diversa,** n. *Nigra*, palpis, halteribus, *abdominis segmentorum marginibus posticis* pedibusque *testaceis, thoracis lateribus anticis subfulvis, alis subcinereis*, tarsis fuscis. Long. 2; alar. 4 lin.

Black. Palpi testaceous. Antennæ testaceous at the base. *Thorax slightly tawny on each side* in front. Wings very slightly greyish; subcostal vein joining the costal before one-third of the length of the wing, not united to the radial; radial ending at about three-fourths of the length, joined to the cubital by a transverse veinlet which is nearly opposite the fork of the subapical; cubital joining the costal at a short distance from the tip of the latter; fork of the subapical vein very much further than the fork of the subanal from the base of the wing; anal vein not extending to the fork of the subanal. Halteres testaceous. *Hind borders of the abdominal segments testaceous.* Legs testaceous; tarsi brown.

Rare. (E.)

17. **defecta,** n. *Mas*, nigra, palpis, abdominis apice pedibusque testaceis, alis sublimpidis, halteribus testaceis apice nigris, trochanteribus nigro-variis, tarsis nigricantibus. Long. 1; alar. 2 lin.

Male. Black. Palpi testaceous. Antennæ submoniliform, a little longer than the thorax. Wings nearly limpid; subcostal vein joining the costal at a little before one-third of the length of the wing, united by a little transverse veinlet with the radial at some distance from its tip; radial joining the costal before two-thirds of the length, united

with the cubital by a veinlet which is a little beyond the base of the subapical vein; cubital joining the costal near the tip of the latter; subapical and subanal slight, the former forked near its base. Halteres testaceous, with black knobs. Abdomen testaceous at the tip. Legs testaceous; trochanters partly black; spurs long; tarsi blackish, minutely setose beneath.

Rare. (E.)

Genus V. **BOLETINA.**

BOLETINA, Stæg. D. D. (1840); Zett. *Mycetophila* p., Meig. *Leia* p., Meig. *Leptomorphus* p., Walk.

Corpus gracile. Oculi ovati. Ocelli tres, intermedius minimus. Palpi arcuati, 4-articulati. Antennæ graciles, filiformes, subcompressæ, fere nudæ, 16-articulatæ. Thorax brevis. *Alæ* sat latæ; *vena subcostalis costæ dimidium fere attingens, cubitalis e venulis transversis areolæ præbrachialis orta. Abdomen longum, gracile, basim versus subcontractum.* Pedes graciles.

Body slender. Eyes oval. Ocelli 3, the middle one very small. Proboscis slightly elongated. Palpi curved, four-jointed. Antennæ slender, filiform, slightly compressed, nearly bare, sixteen-jointed. Thorax short. Wings moderately broad; costal vein ending at hardly in front of the tip of the wing; *subcostal nearly half the length of the wing;* radial ending at a little before five-sixths of the length; cubital joining the tip of the costal, springing from the angle formed by the transverse veinlets which close the præbrachial arcolet; subapical and subanal veins forked or simple; anal vein distinct. Halteres rather short. *Abdomen long and slender, somewhat straitened towards the base.* Legs slender, rather long; tibiæ beset by a few very minute bristles; spurs moderately long. *Male.* Antennæ about twice the length of the thorax. Abdomen cylindrical. *Fem.* Antennæ hardly longer than the thorax. Abdomen subfusiform.

The *Boletinæ* frequent woods, and in their habits much resemble the *Mycetophilæ,* but differ in their more slender structure, and in the greater length of the subcostal vein. *Gnoriste* is nearly allied to them, but is distinguished by the length of its proboscis.

Synopsis of the species:—

a. Subapical vein and subanal vein forked.
  b. Forks of the veins at an equal distance from the base of the wing.
    b b. Fork of the subanal vein nearer than the fork of the subapical to the base of the wing. Species 1–3.
    b b b. Fork of the subanal vein further than the fork of the subapical from the base of the wing. Species 4.
a a. Subapical vein not forked. Species 5.
a a a. Subapical vein and subanal vein not forked.

Of the last division there is but one species, which has as yet been found only in Denmark. It partly agrees with *Azana* in the structure of its wing-veins. The first division is also unknown in Britain. It comprises two European and one Greenland species.

1. **dubia,** Stæg. D. D. 235. 3 (1840); Zett. *Cinereo-nigra,* alis subcincreis, halteribus pedibusque testaceis, tarsis nigris. Long. 3–3½; alar. 5–6 lin.

Black. Antennæ slender, a little longer than the thorax. Head and thorax slightly covered with grey tomentum. Wings very slightly greyish; veinlets of the præbrachial areolet forming a hardly acute angle, the hind one almost four times the length of the fore one, and shorter than the subapical vein before its fork; fork of the subanal vein nearer than the fork of the subapical to the base of the wing; anal vein extending nearly to the fork of the subanal. Halteres testaceous. Abdomen long. Legs testaceous, long, slender; tibiæ darker than the femora; tarsi black; hind tibiæ with rather long spurs and with short spines; fore tibiæ longer than the fore metatarsi.

Not rare. (E.)

2. **borealis?** Zett. D. S. xi. 4160. 8 (1852).—*trivittata* p., Zett. I. L. *Ferruginea,* vertice thoracisque disco cinereis, alis subcinereis, palpis fulvis, halteribus abdominisque marginibus posticis testaceis, tarsis nigricantibus. Long. 3¼; alar. 6 lin.

Ferruginous. Vertex and disc of the thorax cinereous. Palpi tawny. Antennæ black, hardly longer than the thorax. Wings slightly greyish; radial and cubital veins distinct; subapical and subanal veins secondary; veinlets of the præbrachial areolet forming an obtuse angle, the hind one twice the length of the fore one, and hardly one-fifth of the length of the subapical vein before its fork; radial vein undulating; fork of the subanal vein very much nearer than the fork of the subapical to the base of the wing; anal vein extending far beyond the fork of the subanal, but not to the border. Halteres testaceous. Abdomen long, slender; hind borders of the segments testaceous. Legs long, slender; tarsi blackish; hind tibiæ with very short spines and moderately long spurs; fore tibiæ much shorter than the fore metatarsi.

Rare. (E.)

3. **plana,** n. *Nigra,* palpis, halteribus pedibusque testaceis, *thorace maculis duabus anticis fulvis,* alis sublimpidis, femoribus basi nigris, tibiis fulvis, tarsis fuscis. Long. 2¾; alar. 5 lin.

Black. Palpi testaceous. *Antennæ stout, much longer than the thorax. Thorax with a slight tawny spot on each side in front.* Wings nearly limpid; veinlets of the præbrachial areolet forming an obtuse angle, the hind one a little more than twice the length of the fore one, and a little longer than the subapical vein before its fork; fork of the subanal vein a little nearer than the fork of the subapical to the base of the wing; anal vein extending much beyond the fork of the subanal.

Halteres testaceous. Legs testaceous; femora black at the base; tibiæ tawny; tarsi brown; hind tibiæ with small spines and rather short spurs.

Rare. (E.)

4. **flava,** Stæg. D. D. 237. 6 (1840); Zett. Testacea, antennis fuscescentibus, alis subtestaceis, abdomine nonnunquam nigro, tarsis fuscis. Long. $2\frac{1}{4}$–$2\frac{3}{4}$; alar. $4\frac{1}{2}$–$5\frac{1}{4}$ lin.

Testaceous, paler beneath. Antennæ brownish, testaceous at the base. Wings slightly testaceous; veinlets of the præbrachial areolet forming a right angle, the hind one about eight times the length of the fore one, and very much longer than the subapical vein before its fork; fork of the subanal vein very much further than the fork of the subapical from the base of the wing; anal vein extending nearly as far as the fork of the subanal. Abdomen occasionally more or less brown, or wholly black. Legs long, slender; tibiæ darker than the femora; tarsi brown; hind tibiæ with minute spines and moderately long spurs; fore tibiæ as long as the fore metatarsi.

Not rare. (E.)

5. **nemoralis,** Meig. Zw. i. 265. 12 (1818); Mcq.; Stæg.; Zett. —*elongata*, Curt.; Walk. Nigra, palpis testaceis, thoracis maculis duabus anticis, halteribus pedibusque fulvis, alis subcinereis, tarsis nigricantibus. Long. 3–4; alar. 6–7 lin.

Black. Body long, slender, shining. Palpi testaceous. Antennæ tawny at the base. Thorax with a tawny spot on each side in front. Wings slightly greyish; veinlets of the præbrachial areolet forming a slightly obtuse angle, the fore one as long as the hind one; cubital vein slightly undulating; subapical vein not forked, but accompanied by a secondary vein which ends at a little behind the tip of the wing; fork of the subanal vein and tip of the præbrachial areolet at an equal distance from the base of the wing; anal vein extending to a short distance from the border. Halteres tawny. Legs tawny, long, slender; tarsi blackish; hind tibiæ without spines.

Not rare. (E.)

Genus VI. **SCIOPHILA.**

SCIOPHILA, Hoffmansegg; Meig. Zw. i. 245 (1818); Meig.; Curt.; Mcq. *Platyura* p., F.; Meig. Kl. *Asindulum* p., Latr.

Corpus gracile, plerumque elongatum. Caput parvum. Oculi oblongi. *Ocelli tres, intermedius minimus.* Proboscis brevis. Palpi arcuati, 4-articulati. Antennæ filiformes, compressæ, 16-articulatæ, corporis dimidio non longiores. Thorax brevis. *Alæ* sat latæ, *areolis duabus cubitalibus.*

Body elongated, slender. Head small. Eyes oblong. *Ocelli three, the middle one in front very small.* Proboscis short. Palpi curved downward, four-jointed; first and second joints short; third longer;

fourth twice as long, slender, flexible. Antennæ filiform, compressed, sixteen-jointed, about half the length of the body, or rather shorter. Thorax short. Wings moderately broad; subcostal vein slightly curved forward towards its tip, ending at very little beyond half the length, often united with the costal, connected by a transverse veinlet near its tip with the radial; radial straight, ending at about seven-tenths of the length; cubital springing from the radial at before the middle of the wing, near which it forms a hardly obtuse angle at its junction with the præbrachial transverse, and is thence straight to the end, which is at the tip of the wing; subapical forked at beyond the middle of the wing; fore fork ending at some little distance behind the tip of the wing; subanal forked at about one-third of the length of the wing, its forks straight; anal ceasing at a short distance from the posterior margin; humeral veinlet very near the base; *areolets* twelve—the humeral, the subcostal, the radial, the præbrachial, the pobrachial, *two cubital*, the subapical, two externo-medial, the anal, and the axillary; radial and cubital veins each divided by a transverse veinlet; posterior margin forming a slight acute angle at full thrice the length of the humeral areolet from the base. Halteres rather short. Abdomen more than twice the length of the thorax, somewhat straitened towards the base. Legs long, slender; coxæ and femora slightly hairy; tibiæ slightly setose; spurs of moderate length. *Male.* Antennæ about half the length of the body. Abdomen nearly cylindrical. *Fem.* Antennæ much less than half the length of the body. Abdomen elongate-fusiform.

The *Sciophilæ* frequent herbage and leaves of trees in shady woods, and in general appearance much resemble the *Mycetophilæ.* The two cubital areolets in their wings at once distinguish them from all the other genera of this Family, and the variations of the form of the first cubital areolet will serve to arrange them in the following groups:—

a. Subcostal vein of moderate length.
- *b.* First cubital areolet thrice longer than broad. Species 1.
- *b b.* First cubital areolet nearly thrice longer than broad. Species 2.
- *b b b.* First cubital areolet more than twice longer than broad. Species 9, 12, 22.
- *b b b b.* First cubital areolet twice longer than broad. Species 5–7, 10, 18, 25.
- *b b b b b.* First cubital areolet nearly twice longer than broad. Species 3, 8, 21.
- *b b b b b b.* First cubital areolet much longer than broad. Species 4, 13–15.
- *b b b b b b b.* First cubital areolet a little longer than broad. Species 11, 16, 26.
- *b b b b b b b b.* First cubital areolet not longer than broad. Species 17, 19, 20.

a a. Subcostal vein very short. Species 23, 24.

In the sixteen following species the fork of the subapical vein is much further than the fork of the subanal from the base of the wing.

1. **tenuis,** n. Fulva, palpis halteribus pedibusque testaceis, antennis thoracisque vittis tribus nigricantibus, alis sublimpidis. Long. $2\frac{1}{2}$; alar. 4 lin.

Tawny, slender. Vertex black. Palpi testaceous. Antennæ blackish, testaceous at the base. Thorax with three blackish stripes, the middle one extending to the fore border, the lateral pair short. Wings nearly limpid; the transverse veinlet from the subcostal vein opposite the middle of the first cubital areolet, which has slightly acute fore angles, and slightly obtuse hind angles, the outer side slightly undulating. Halteres testaceous. Legs testaceous, long, very slender; hind tibiæ with very minute spines and rather short spurs.

Rare. (E.)

2. **hyalinata?** Meig. Zw. vi. 295. 15 (1830); Stæg.; Zett. Testacea, vertice, thoracis disco antennisque nigris, alis subcinereis, abdomine fusco, segmentorum marginibus posticis testaceis, tarsis nigricantibus. Long. $2\frac{1}{2}$–3; alar. $5\frac{1}{2}$–6 lin.

Testaceous. Vertex and disc of the thorax black. Antennæ black, testaceous at the base. Wings greyish; subcostal veinlet opposite the middle of the first cubital areolet; the latter rather large, with slightly acute fore angles, and equally obtuse hind angles; cubital vein curved. Abdomen brown; hind borders of the segments testaceous. Tibiæ darker than the femora; tarsi blackish; hind tibiæ with very minute spines and rather short spurs.

Not common. (E.)

3. **marginata,** Meg.; Meig. Zw. i. 249. 8 (1818); Stæg.; Rs.; Zett.—*unimaculata?* Mcq. *Testacea*, vertice, antennis, thoracisque vittis tribus nigris, alis subcinereis, *areola cubitali prima obscura*, abdomine nigro, fasciis testaceis, tarsis fuscis. Long. $2\frac{1}{2}$–3; alar. $5\frac{1}{2}$–6 lin.

Testaceous. Vertex black. Antennæ black, testaceous towards the base. Thorax with three black or brown stripes, the lateral pair short. Wings very slightly greyish; transverse veinlet from the subcostal vein opposite the middle of the *first cubital areolet*, which is *clouded* and rather large; fore angles slightly acute, hind angles slightly obtuse. Abdomen black, with a testaceous band on the hind border of each segment. Tarsi brown; hind tibiæ with minute spines and moderately long spurs.

Not rare. (E. I.)

4. **fasciata,** Fries; Zett. I. L. 858. 3 (1840); Stæg. Testacea, vertice, antennis *thoracis*que *vittis tribus nigris*, alis subcinereis, abdomine nigro fasciis testaceis, tarsis fuscis. Long. 2–3; alar. $4\frac{1}{2}$–6 lin.

Testaceous. Vertex black. Antennæ black, testaceous at the base. *Thorax with three black stripes*, the lateral pair short. Wings slightly

greyish; subcostal veinlet opposite the middle of the first cubital areolet, which is rather large, *not clouded*, with slightly acute fore angles, and slightly obtuse hind angles. Abdomen black, with a testaceous band on the hind border of each segment. Tarsi brown; hind tibiæ with minute spines and moderately long spurs.

Common. (E.)

5. **hilaris,** n. *Testacea*, vertice, antennis, *thoracis vittis tribus abdominisque fasciis nigris*, alis sublimpidis, trochanteribus tarsisque nigricantibus. Long. $2\frac{1}{2}$–3; alar. 5–6 lin.

Testaceous. Vertex black. Antennæ black, testaceous at the base. *Thorax with three black stripes*, the lateral pair shortened in front. Wings nearly limpid; subcostal vein joining the costa; its veinlet opposite the middle of the first cubital areolet; the latter is of moderate size, with slightly acute fore angles and equally obtuse hind angles. *Abdominal segments with black bands.* Trochanters and tarsi blackish; hind tibiæ with very minute spines and moderately long spurs.

Much resembles *S. marginata*, but may be distinguished by the unclouded first cubital areolet. Not common. (E.)

6. **congrua,** n. *Nigra*, palpis fulvis, *thoracis maculis duabus anticis scutello pectoreque ferrugineis*, alis subcinereis, halteribus pedibusque testaceis, tarsis nigricantibus. Long. $2\frac{1}{4}$; alar. $4\frac{1}{2}$ lin.

Black. Palpi tawny. Antennæ ferruginous at the base. *Thorax with a ferruginous spot on each side in front. Scutellum and pectus ferruginous.* Wings greyish; subcostal veinlet a little beyond the middle of the first cubital areolet; the latter of moderate size, not clouded, with slightly acute fore angles and equally obtuse hind angles. Halteres testaceous. Legs testaceous, long; tarsi blackish; hind tibiæ with minute spines and moderately long spurs.

Not common. (E.)

7. **trivittata,** Zett. I. L. 858. 2 (1840). *Cinerea, subtus cana*, palpis, thoracis maculis duabus anticis, halteribus, ventre pedibusque testaceis, alis subcinereis, tarsis nigricantibus. Long. $2\frac{1}{2}$; alar. 5 lin.

Grey, hoary beneath. Vertex black. Palpi testaceous. Antennæ black, testaceous at the base. *Thorax with a testaceous spot on each side in front.* Wings slightly greyish; subcostal veinlet before the middle of the first cubital areolet, which is rather large, not clouded, rectangular on the apical side; the fore basal angle slightly acute, the hind one slightly obtuse. Halteres testaceous. Abdomen testaceous beneath and along the hind borders of the segments on each side. Legs testaceous, long, slender; tarsi blackish; hind tibiæ with minute spines and moderately long spurs.

Not common; appears in May. (E.)

8. **annulata,** Meig. Zw. i. 247. 4 (1818); Rs.—*annulata*, var. *b?* Stæg.—*incisurata?* Zett. *Testacea*, antennis thoracisque fasciis tribus

nigris, alis subcinereis, abdomine fusco, fasciis testaceis, tarsis fuscis. Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Testaceous. Vertex brown. Antennæ black, testaceous at the base, longer than the thorax in the male, shorter in the female. Thorax with three more or less broad brown or black stripes, the lateral pair occasionally short. Wings very slightly greyish; subcostal veinlet beyond the middle of the first cubital areolet; this is rather large. Abdomen brown, with a testaceous band on the hind border of each segment; tarsi brown; hind tibiæ with minute spines and moderately long spurs; hind apical angle more obtuse than the basal one; fore apical angle equally obtuse.

Not rare. (E.)

9. **cingulata,** Meig. Zw. i. 247. 5 (1818). *Testacea,* vertice, antennis, thoracis vittis tribus tarsisque fuscis, alis subcinereis, *abdomine fusco fasciis testaceis.* Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Testaceous. Vertex brown. Antennæ brown, testaceous at the base, a little longer than the thorax. Thorax with three brown stripes, the lateral pair short. Wings slightly greyish; subcostal vein not joining the costal, its veinlet beyond the middle of the cubital areolet; the latter is rather large, with slightly acute fore angles and equally obtuse hind angles. *Abdomen brown; hind borders of the segments testaceous;* tarsi brown; hind tibiæ with very minute spines and moderately long spurs.

Not rare. (E. I.)

10. **fimbriata?** Meig. Zw. i. 247. 3 (1818). *Fulva,* vertice, thoracisque vittis tribus piceis, antennis tarsisque fuscis, alis subcinereis, halteribus pedibusque testaceis. Long. $2\frac{1}{2}$; alar. 5 lin.

Tawny. Vertex piceous. Antennæ brown, testaceous towards the base. Thorax with three piceous stripes, the middle one in advance. Wings very slightly greyish; the transverse veinlet from the subcostal vein opposite the middle of the first cubital areolet, which is rather longer than that of *S. fasciata,* with slightly acute fore angles and slightly obtuse hind angles. Halteres and legs testaceous, the latter long and slender, with very minute spines and rather short spurs; tarsi brown.

Rare. In the British Museum. (E.)

11. **vitripennis,** Meig. Zw. i. 251. 13 (1818); Mcq.; Rs.—*Nigra,* antennis basi thoracisque lateribus anticis fulvis, alis limpidis, halteribus pedibusque testaceis, abdominis apice ferrugineo, tarsis fuscis. Long. $2\frac{1}{2}$; alar. 5 lin.

Black. Antennæ tawny at the base. Thorax tawny on each side in front. Wings limpid; subapical and subanal veins pale. Halteres testaceous. Abdomen ferruginous at the tip. Legs testaceous; tarsi brown.

Rare. In the British Museum. (E. I.)

12. **ferruginea,** Meig. Zw. i. 249. 9 (1818). *Testacea*, vertice, antennis thoracisque vittis tribus nigris, alis subcinereis, abdomine fasciis fuscis, tarsis fuscescentibus. Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Testaceous. Vertex black. Antennæ black, testaceous at the base, not longer than the thorax in the female. Thorax with three black stripes, the lateral pair short. Wings very slightly greyish; subcostal vein not joining the costal; its veinlet a little beyond the middle of the first cubital areolet; the latter is rather large, with slightly acute fore angles and slightly obtuse hind angles. *Abdomen with a brown band on the hind border of each segment.* Tarsi brownish; hind tibiæ with minute spines and rather short spurs.

Not common. (E.)

13. **ruficollis?** Zett. D. S. xi. 4121. 17 (1852). Testacea, antennis nigris, alis limpidis, abdominis suturis apiceque nigricantibus, tarsis fuscis. Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Testaceous. Antennæ black, testaceous at the base. Wings limpid; subcostal vein not joining the costal; its veinlet before the middle of the first cubital areolet; the latter is of moderate size, with acute fore angles and obtuse hind angles. Sutures and tip of the abdomen blackish. Tarsi brown; hind tibiæ with minute spines and moderately long spurs.

Not common. (E.)

14. **punctata?** Latr. G. C. iv. 261 (1810); Meig. *Fulva*, vertice nigro, palpis, halteribus pedibusque testaceis, antennis tarsisque nigricantibus, *thoracis disco fusco*, alis subcinereis. Long. 2; alar. 4 lin.

Tawny. Vertex black. Palpi testaceous. Antennæ blackish, testaceous at the base. *Disc of the thorax dark brown.* Wings greyish; subcostal vein not joining the costal; its veinlet beyond the middle of the first cubital areolet; the latter is of moderate size, with the basal angles nearly rectangular, the fore apical angle acute, the hind apical angle obtuse. Halteres testaceous. Legs testaceous, rather stout; tarsi blackish; hind tibiæ with minute spines and moderately long spurs.

Rare. (E.)

15. **trilineata?** Zett. I. L. 859. 6 (1840), var.? Testacea, vertice nigricante, antennis *thoracis vittis tribus* tarsisque *fuscis*, alis sublimpidis, abdomine ferrugineo, trochanteribus fusco-notatis. Long. 2; alar. 4 lin.

Var.?—Testaceous. Vertex blackish. Antennæ brown; first, second, and third joints testaceous. *Thorax with three remote brown stripes;* lateral pair short. Wings nearly limpid; subcostal vein not joining the costal; its veinlet opposite the middle of the first cubital areolet; the latter is of moderate size, with acute fore angles and obtuse hind angles. Abdomen pale ferruginous. Trochanters with a brown spot on each; tarsi brown; hind tibiæ with minute spines and moderately long spurs.

Not common. (E.)

16. **lutea,** Mcq. D. i. 139. 10 (1826); Meig.; Stæg.; Zett.? *Lutea,* subtus testacea, vertice nigro, antennis fuscis, alis sublimpidis, abdomine fulvo, tarsis fuscescentibus. Long. 2; alar. 4 lin.

Luteous, testaceous beneath. Vertex black. Antennæ brown, testaceous at the base. Wings nearly limpid; first cubital areolet very small; basal fore angle and hind apical angle slightly acute; the other two slightly obtuse. Abdomen tawny; tarsi brownish.

Not common. (E.)

17. **rufilatera,** Walk. E. M. iv. 115 (1837). *Nigra,* palpis, *thoracis maculis duabus anticis, abdominis lateribus* pedibusque *fulvis,* alis subcinereis, halteribus testaceis, tarsis fuscis. Long. $1\frac{3}{4}$; alar. $3\frac{1}{2}$ lin.

Black. Palpi tawny. Antennæ tawny at the base. *Thorax with a tawny spot on each side in front.* Wings slightly greyish; the transverse veinlet from the subcostal vein nearer than the first cubital areolet to the base of the wing; cubital areolet very small, almost square. Halteres testaceous. *Abdomen tawny on each side except towards the tip.* Legs tawny; tarsi brown; hind tibiæ with minute spines and rather long spurs.

Rare. In the British Museum. (E.)

18. **hirta,** Hoffm.; Meig. Zw. i. 251. 12 (1818); Mcq.; Stæg.; Zett.—*pilosula,* Zett. I. L., var.—*nitidicollis,* Meig., var.? *Nigra,* palpis, halteribus pedibusque testaceis, alis subcinereis, tarsis fuscis basi testaceis, femoribus posticis basi apiceque tibiisque posticis apice nigricantibus. Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Black. Palpi testaceous. Antennæ longer than the thorax. Wings greyish; first cubital areolet of moderate size, about twice longer than broad, hardly widening outward, fore basal angle slightly acute, hind basal angle slightly obtuse; apical angles almost right angles; fork of the subapical vein much nearer than the fork of the subanal to the base of the wing. Halteres testaceous. Legs testaceous; tarsi brown, testaceous at the base; hind femora blackish at the base and at the tips; hind tibiæ with black tips.

Not rare. (E.)

19. **ochracea,** Steph. MSS. *Testacea,* pubescens, robusta, antennis fuscis, alis limpidis, pedibus validis breviusculis, tibiis spinosis, tarsis fuscescentibus. Long. $2\frac{1}{2}$; alar. 5 lin.

Testaceous, pubescent, rather stout. Antennæ brown, testaceous at the base. Wings limpid; subcostal veinlet before the first cubital areolet, the latter very small, with two basal right angles; the fore apical angle acute, and the hind apical angle obtuse; fork of the subapical vein much nearer than the fork of the subanal to the base of the wing. Abdomen mostly tawny above. Legs rather short and stout; tarsi brownish; posterior tibiæ thickly beset with stout spines.

Rare. In the British Museum. (E.)

20. **nigra,** Meq. D. N. i. 44. 7 (1825); Meig.—*subincana?* Curt. *Nigra,* hirta, alis sublimpidis, halteribus pedibusque testaceis, tarsis fuscescentibus. Long. 2; alar. 4 lin.

Black, hairy. Antennæ of the male a little longer than the thorax, of the female shorter. Wings nearly limpid; first cubital areolet very small, almost square; subapical vein before its fork very little longer than the first cubital areolet, forked much before the middle of the wing; subanal vein forked much beyond the middle of the wing. Halteres testaceous. Legs testaceous; tarsi brownish.

Not rare. (E.)

21. **maura,** n. *Cinereo-nigra,* palpis, halteribus pedibusque testaceis, alis sublimpidis, tarsis nigricantibus. Long. 2¼; alar. 4 lin.

Cinereous-black. Palpi testaceous. Wings nearly limpid; subcostal vein not joining the costal, its veinlet a little before the middle of the first cubital areolet; the latter is of moderate size, with very slightly acute fore angles, and equally obtuse hind angles; subapical vein forked at very little beyond half its length; subanal forked opposite the first cubital areolet, and much nearer than the fork of the subapical to the base of the wing. Halteres and legs testaceous; tarsi blackish; hind tibiæ with very minute spines and moderately long spurs.

Not rare. (E.)

22. **fenestella,** Curt. B. E. 641 (1837). *Nigra,* alis subcinereis, halteribus pedibusque testaceis, femoribus tibiisque posticis apice trochanteribus tarsisque nigricantibus. Long. 1¾; alar. 3 lin.

Black. Antennæ rather stout, a little less than half the length of the body in the male. Wing very slightly greyish; subcostal vein ending at a little before the middle of the first cubital areolet, not connected with the radial; radial joining the costal before three-fourths of the length; cubital joining the costal at some little distance from the tip of the latter, which is a little in front of the tip of the wing; first cubital areolet of moderate size, the fore basal angle slightly acute, the hind basal one slightly obtuse, the outer angles nearly rectangular; subapical vein forked at a little beyond the end of the first cubital areolet; subanal forked at the base of the wing. Halteres testaceous. Legs testaceous, rather short and stout; trochanters, tarsi and tips of the hind femora and of the hind tibiæ blackish; hind tibiæ with very minute spines and moderately long spurs.

Not common. (E.)

23. **compressa,** n. *Mas, cinereo-nigra,* palpis, halteribus, coxis femoribusque testaceis, alis sublimpidis, abdomine subcompresso, pedibus validis brevisculis. Long. 1½; alar. 3 lin.

Male. Cinereous-black. Palpi testaceous. Antennæ rather stout, testaceous at the base, rather less than half the length of the body. Wings nearly limpid; subcostal vein rudimentary; radial joining the costal before two-thirds of the length; cubital joining the costal at some distance from the tip of the latter, which is very little in front of

the tip of the wing; first cubital areolet very narrow, about thrice longer than broad; subapical and subanal veins slight, pale, secondary; fork of the former opposite the first cubital areolet; fork of the latter nearer the base of the wing. Halteres testaceous. Abdomen slightly compressed. Legs blackish, rather short and stout; coxæ and femora testaceous; hind tibiæ with very minute spines and moderately long spurs.

Not common. (E.)

24. **aliena,** n. *Mas, cinereo-nigra,* palpis, halteribus, *abdominis lateribus ventreque basim versus,* coxis femoribusque *testaceis,* alis subcinereis, abomine subcompresso, femoribus posticis apice nigris. Long. $1\frac{1}{2}$; alar. $2\frac{1}{2}$ lin.

Male. Cinereous-black. Palpi testaceous. Antennæ hardly longer than the thorax, testaceous at the base. Wings slightly greyish; subcostal vein very short, joining the costal before one-sixth of the length of the wing; radial joining the costal before two-thirds of the length; cubital ending at about five-sixths of the length; first cubital areolet very narrow, full four times longer than broad; subapical and subanal veins slight; subapical vein forked opposite the end of the first cubital areolet; subanal forked at the base of the wing. Halteres testaceous. *Abdomen* slightly compressed, *testaceous beneath and on each side towards the base.* Legs rather short and stout; coxæ and femora testaceous; hind femora with black tips; hind tibiæ with very minute spines and rather long spurs.

Rare. Found in June, on the banks of the Wye, near Chepstow. (E.)

25. **pictipennis,** Hal. A. N. H. 11 (1838). Testacea, fronte verticeque subfuscis, antennis fuscis, *alis hyalinis fasciis duabus fuscis,* abdomine fasciis nigris, tarsis fuscescentibus. Long. $1\frac{3}{4}$; alar. $3\frac{1}{2}$ lin.

Testaceous. Front and vertex brownish. Antennæ brown, yellow at the base. *Wings hyaline, with two brown bands;* one in the middle of the wing, extending beyond the areolet, and sinuated thence to the hind border; the other subapical, extending to the tip of the radial vein. First and second abdominal segments unspotted; third and fourth black, with testaceous hind border; fifth and sixth almost wholly black; hypopygium testaceous. Tarsi brownish.

Very rare. Has been found once in Kent. In Mr. Haliday's collection. (E.)

26. **halterata,** Stæg. D. D. (1840); Zett. D. S. xi. 4138. 34 (1852). *Testacea,* vertice fronte antennisque nigro-fuscis, alis fusco-venosis, vena pobrachiali integra, areola minutissima, *abdomine fuscescente.* Long. $2\frac{1}{2}$; alar. 4 lin.

Testaceous. Vertex and front blackish-brown. Antennæ blackish-brown, rather stout; first and second joints ferruginous. Thorax slightly shining, with pale hairs. Wings hyaline; veins brown, rather

stout; subcostal vein not extending much beyond the areolet, connected with the radial before the areolet, which is very small; fork of the præbrachial vein with a very short petiole, almost sessile; pobrachial vein entire. Halteres with a blackish-brown knob. *Abdomen brownish.* Posterior tibiæ with short, but distinct little spines. The whole stature with the antennæ and legs shorter than in *S. rufa;* veins of the wings stouter, and differently arranged.

Very rare. Has been found once in Tullymore Park, County Down. In Mr. Haliday's collection. (I.)

Genus VII. **TETRAGONEURA.**

TETRAGONEURA, Winn. Ent. Zeit. Stett. vii. 18 (1846). *Sciophila* p., Meig.; Curt. *Mycetophila* p., Meig.

Corpus gracile, elongatum. Caput parvum. Oculi rotundi. *Ocelli tres, lineam paullulum curvatam efficientes, intermedius paullo minor.* Proboscis brevis. Palpi exserti, incurvi, 4-articulati. Antennæ filiformes, porrectæ, subcompressæ, 6-articulatæ, corporis dimidio non longiores; articulus primus cyathiformis; secundus cupuliformis; tertius et sequentes cylindrici. Thorax ovatus. *Alæ* obtusæ, incumbentes, parallelæ, sat latæ, *areolis duabus cubitalibus.* Abdomen segmentis 7. Pedes longiusculi; coxæ elongatæ; femora compressa; tibiis apice calcaratæ, posticæ spinosæ. *Mas.* Abdomen cylindricum, forcipe brevi. *Fœm.* Abdomen subcompressum, acuminatum.

Body slender, elongated. Head small, round; vertex broad. Eyes round. *Ocelli three, forming a curved line on the front, the middle one rather smaller than the others.* Proboscis short. Labium short, fleshy, bifid, and hairy in front. Palpi four-jointed, porrect, curved; first joint very small; fourth long, filiform. Antennæ sixteen-jointed, porrect, curved; first and second joints bristly; first cyathiform; second elongate, cyathiform; third and following joints short, cylindrical. Thorax oval, convex. Scutellum small, obtuse behind, with long bristles. *Wings* almost oval, obtuse, incumbent, parallel, longer than the abdomen; subcostal vein very short; radial ending at much beyond half the length of the wing; cubital ending at much before the tip of the wing; subapical forked at beyond the middle of the wing; fore fork ending at the tip of the wing; subanal ending nearer the base of the wing; anal not extending to the border of the wing; *two cubital areolets.* Abdomen with seven segments. Legs rather long; coxæ elongated; femora compressed; tibiæ armed with spurs, the hind pair with lateral spines. *Male.* Abdomen cylindrical, with short forceps at the tip. *Fem.* Abdomen slightly compressed, acuminated.

Tetragoneura is nearly allied to *Sciophila,* but the two genera may be distinguished by the following characters, and by some

differences in the wing-veins. In *Sciophila* the head is almost conical; the eyes are not quite circular, generally almost reniform; the ocelli form a very minute triangle, the middle one is very small, and the joints of the antennæ are somewhat compressed. In *Tetragoneura* the head is round, flat above; the eyes are circular; the ocelli are of nearly equal size, and are disposed in a curved line; and the joints of the antennæ are cylindrical.

1. **hirta,** Winn. Ent. Zeit. Stett. vii. 19 (1846).—*dissimilis*, Zett. *Mas et Fœm.* nigra, proboscide, palpis et *antennarum articulis primo et secundo flavis*, thorace nigro-cinereo, alis hyalinis, *vena subcostali in radiali exeunte ante areolam, furca venæ pobrachialis prope basim alæ*, coxis femoribusque albo-flavis, tibiis tarsisque fuscis; *Mas*, abdomine nigro nitido, segmentis basalibus subtus flavis; *Fœm.* abdomine flavo, vitta dorsali fasciisque nigris. Long. $1\frac{1}{2}$; alar. 3 lin.

Male and Fem. Black, clothed with whitish hairs. Proboscis and palpi yellow. *First and second joints of the antennæ yellow.* Thorax blackish-grey, beset with long whitish-yellow bristles. Wings hyaline; costal, radial, and cubital veins brown, the rest nearly colourless; *subcostal vein ending in the radial before* its middle, at a distance before *the areolet* equal to the length of the latter; areolet oblong, almost longer than the last segment (following it) of the radial vein; fork of the præbrachial vein opposite the transverse cubital vein, or the apex of the areolet; fork of the pobrachial retracted almost to the base of the wing. Halteres white. Coxæ and femora whitish-yellow; second joint of the coxæ and hind femora with black tips, the latter with a black streak at the base on the under side; tibiæ and tarsi brown. *Male.* Abdomen black, shining, clothed with whitish-yellow hairs; first and second, and occasionally the third of the ventral segments yellow. *Fem.* Abdomen yellow; segments with a black dorsal stripe and black bands; sixth and seventh segments wholly black.

Very rare. Has been found in Down, Ireland. In Mr. Haliday's collection. (I.)

2. **sylvatica,** Curt.! B. E. xiv. pl. 641 (1837);—*distincta*, Winn. Nigra, proboscide, palpis et *antennarum articulo secundo flavis*, thorace nigro-cinereo, alis hyalinis, *furca venæ pobrachialis prope medium alæ, vena subcostali obsoleta*, coxis femoribusque albo-flavis, tibiis tarsisque fuscis; *Mas*, abdomine nigro nitido, segmentis basalibus subtus flavis; *Fœm.* abdomine nigro, ventre flavo. Long. $1\frac{1}{2}$; alar. 3 lin.

Male and Fem. Black. Proboscis, palpi, and second *joint of the antennæ yellow.* Thorax blackish-grey, beset with long whitish-yellow bristles. Wings obscurely hyaline; veins towards the costa brownish-ferruginous; subcostal vein obsolete; areolet minute, oblong; fork of the præbrachial vein opposite to the præbrachial median transverse vein, or to the base of the areolet; fork of the pobrachial rather nearer to the base of the wing; its anterior branch equal to the common

petiole. Halteres white. Coxæ and femora whitish-yellow; second joint of the coxæ and hind femora with black tips, the latter with a black streak at the base on the under side; tibiæ and tarsi brown. *Male.* Abdomen black, shining, clothed with whitish-yellow hairs; first and second, and occasionally the third, of the ventral segments yellow. *Fem.* Abdomen black, yellow beneath.

Rare. (E. I.)

3. **melanoceras,** n. "Nigra, *antennis totis nigris, alis* obscure hyalinis, *vena subcostali in costali exeunte contra areolam, furca venæ pobrachialis ante medium alæ.* Long. $1\frac{1}{2}$; alar. 3 lin."

"Black, slightly shining. Mouth and palpi yellowish. *Antennæ wholly black,* filiform, longer than the thorax. Thorax slightly glistening-cinereous, with some yellowish hairs. Wings obscurely hyaline; veins brown; the three anterior or costal veins stouter, blackish-brown except at the base; *subcostal vein complete, ending in the costa* very little beyond the base of the areolet, which is elongated as in *T. hirta,* but slightly dilated at the tip; median vein not longer than the areolet, and for the most part pale; *fork of the pobrachial vein opposite the base of the median vein, and therefore longer than the fork of the præbrachial, but not so near to the base of the wing as in* T. hirta. Halteres whitish. Abdomen elongated, with pale sutures. Legs yellow; tips of the coxæ of the hind femora and (more slightly) of the hind tibiæ brownish; tibiæ darker than the femora, with pale yellow spurs; fore tibiæ bare, the posterior minutely spinulose; tarsi almost brown; fore tarsi not twice the length of the fore tibiæ, dilated, and slightly compressed in the middle."—*Hal. MSS.*

Very rare. Has been found at Holywood, near Belfast. In Mr. Haliday's collection. (I.)

"The subcostal vein running to the costal, and the length of the fork of the pobrachial, seem to afford the chief distinctive character of this species. I should remark that the subcostal vein running to the costal takes away one of the distinctive characters of *Tetragoneura,* as compared with *Sciophila;* but the near approach of the radial to the cubital, and consequent narrowness of the small areolet, and the cubital vein terminating some way before the tip of the wing, with the general resemblance to the other species of *Tetragoneura,* led me to place it in this genus."—*Hal. MSS.*

Genus VIII. **ASINDULUM.**

Asindulum, Latr. H. N. Cr. et Ins. xiv. 290 (1804). *Tipula* p., F. *Platyura* p., Meig.; Zett. *Macrorrhyncha,* Winn.

Corpus elongatum. Oculi oblongi, intus emarginati. Ocelli tres, fron-

tales; intermedius anticus, minor. *Proboscis elongata, sub pectore inflexa, profunde bifida, labiis elongatis.* Palpi exserti, distincte 4-articulati. Antennæ 17-articulatæ, porrectæ, subcompressæ; articulus primus cyathiformis; secundus cupuliformis; tertius et sequentes cylindrici; septimus-decimus minimus. Thorax ellipticus, convexus. Scutellum parvum, semilunatum. Alæ obtusæ, pubescentes, incumbentes, parallelæ. Abdomen cylindricum, segmentis 8. Pedes sat longi; coxæ elongatæ; femora valida, nuda; tibiæ apice calcaratæ, posteriores lateribus spinulosæ.

Body long. Head nearly oval, depressed in front. Vertex convex. Front broad. Eyes oblong, emarginated on the inner side. Ocelli three, the middle one in front, smaller than the other two. *Mouth produced into a short rostrum. Proboscis very long, bent under the pectus, deeply bifid, with elongate lips.* Palpi porrect, with four distinct joints; first joint small; second longer than the third; fourth as long as the third. Antennæ seventeen-jointed, porrect, curved; first joint cyathiform; second elongate-cyathiform; third and following joints cylindrical, pubescent, approximate; seventeenth very small, nearly conical. Thorax elliptical, convex. Scutellum small, semilunate. Metathorax convex. Wings obtuse, minutely pubescent, parallel in repose; subcostal vein very short; radial ending at much beyond half the length of the wing; cubital forked, its fore fork ending much nearer to the radial vein than to the tip of the second fork, which ends at a little in front of the tip of the wing; subapical forked near its base, its fore fork ending at a little behind the tip of the wing; subanal forked much nearer to the base of the wing, its fore fork connected by a transverse veinlet with the cubital before the fork of the subapical; anal and axillary veins short. Abdomen cylindrical, with eight segments. Legs rather long; coxæ elongated; femora, especially the hind pair, stout, bare; tibiæ armed with spurs at the tips; hind tibiæ with minute lateral spines. *Male.* Abdomen cylindrical; tip obtuse, with small forceps. *Fem.* Abdomen subfusiform, acuminated at the tip.

1. **flavum,** Winn. Ent. Zeit. Stett. vii. 17 (1846). *Mas et Fœm.* flavum, proboscide, palpis antennisque fuscescentibus, thorace nigro-hirto, vittis tribus pallide flavo-fuscis, alis flavescentibus, halteribus pedibusque albidis, abdomine flavido, apice nigro, tibiis pallide fuscis, tarsis obscure fuscis; *Mas,* abdominis segmentis intermediis fuscis; *Fœm.* abdominis segmentis intermediis nigro-marginatis. Long. 2–2$\frac{2}{3}$; alar. 4–5 lin.

Male and Fem. Yellow. Proboscis, palpi, and antennæ brown. Thorax with three pale indistinct yellowish-brown stripes, clothed with black hairs. Wings yellowish. Halteres whitish. Legs whitish; tibiæ pale brown; tarsi dark brown. *Male.* Abdomen brown; first and second segments yellow; sixth, seventh, and eighth black. *Fem.* Abdomen dingy pale yellow; third, fourth, and fifth segments with black sutures; seventh and eighth black.

Rare. June, Tullymore Park. The larva inhabits decayed wood. In the collection of Mr. Haliday. (I.)

Genus IX. **LEPTOMORPHUS.**

LEPTOMORPHUS, Curt. B. E. 365 (1831).

Mas. Corpus gracile. Caput parvum. Palpi capitis longitudine, 4-articulati. Oculi ovati. Ocelli duo, distincti. Antennæ filiformes, 16-articulatæ, corporis dimidio breviores. Thorax brevissimus. *Alæ* angustæ; *vena cubitalis non furcata; subanalis furcata.* Halteres breviusculi. Abdomen subcompressum, apicem versus subincrassatum, thorace quadruplo longior. Pedes longi, graciles; *tibiæ spinis minimis calcaribusque longis.*

Male. Body slender. Head small. Palpi four-jointed, as long as the head; fourth joint long and slender. Eyes oval. Ocelli two, distinct. Antennæ filiform, sixteen-jointed, less than half the length of the body. Thorax very short. *Wings* narrow; costal vein ending at very little in front of the tip of the wing; subcostal ending at a little before half the length, connected near its tip with the radial by a very short transverse veinlet, which is very near another between the radial and the cubital; radial ending at beyond five-sixths of the length; cubital united with the tip of the costal, not forked; *fork of the subapical vein much beyond the fork of the subanal, which is nearly opposite the transverse veinlets;* anal vein extending a little beyond the fork of the subanal. Halteres rather short. Abdomen slightly compressed, rather thickened towards the tip, full four times the length of the thorax. *Legs* long, slender; *tibiæ with* very minute spines and *long spurs.*

1. **Walkeri,** Curt. B. E. 365 (1831). Testaceus, antennis, thoracis vittis tribus, abdominis fasciis tarsisque fuscis, alis sublimpidis macula discali fusca apicibus cinereis. Long. 5; alar. 7 lin.

Testaceous. Antennæ brown, testaceous towards the base. Thorax with three brown stripes, which are united hindward. Wings nearly limpid, with grey tips and with a brown spot at the tip of the præbrachial areolet. Abdomen brown towards the tip; hind borders of the segments brownish. Tarsi brown.

Not common. (E.)

Genus X. **DIADOCIDIA.**

DIADOCIDIA, Ruthe, Isis xi. 1210 (1831); Winn. *Mycetobia* p., Meig. *Macroneura*, Mcq. *Sciara* p., Zett.

Corpus lineare, breviusculum, fere nudum. Caput rotundum, supra

depressum. Facies pilosa. Oculi reniformes. Ocelli tres, fere æquales; intermedius anticus, lateralibus vix minor. Palpi 4-articulati, graciles. Antennæ latiusculæ, fere cylindricæ, 17-articulatæ, corporis dimidio non longiores; articulus septimus-decimus minimus. Thorax subrotundus, convexus. Scutellum parvum. *Alæ* sat latæ, pubescentes; *vena subanalis simplex*. Halteres breves. Abdomen cylindricum, segmentis 7, thorace multo longius. Pedes graciles, sat breves, subpubescentes; femora valida; *tibiæ* graciles, calcaratæ, *posticæ spinis nonnullis minimis.*

Body linear, nearly bare, rather short. Head round, flat above. Face pilose. Eyes reniform. Ocelli three, the middle one in front, hardly smaller than the others. Palpi four-jointed, slender. Antennæ seventeen-jointed, rather stout, almost cylindrical, not more than half the length of the body; seventeenth joint very small. Thorax nearly round, convex. Scutellum small. *Wings* moderately broad, pubescent, parallel in repose; subcostal vein ending at much less than half the length of the wing; radial springing from the subcostal near its base, ending at a little in front of the tip of the wing; cubital and subapical long, springing from an angular transverse veinlet, the latter forked at a little before half its length; *subanal simple;* anal reaching the border. Halteres short. Abdomen much longer than the thorax, cylindrical, with seven segments. *Legs* rather short, slightly pubescent; femora stout; tibiæ slender, armed with spurs at the tips; *hind tibiæ with some slender and very short lateral spines.*

1. **ferruginosa,** Meig. Zw. vi. 294 (1830); Winn.—*flavicans*, Ruthe.—*Winthemi*, Mcq.—*testacea*, Zett. Tota ferruginea, alis fulvescentibus, tarsis fuscis. Long. $1\frac{1}{2}$; alar. 3 lin.

Rare. Has been found by Mr. Haliday at Killarney. (I.)

Genus XI. **MYCETOBIA.**

MYCETOBIA, Meig. Zw. i. 229 (1818); Mcq.; Winn.

Corpus lineare, breviusculum, fere nudum. Caput rotundum, supra depressum. Oculi reniformes. Ocelli tres; intermedius anticus, parvus. Palpi 4-articulati. Antennæ latiusculæ, 17-articulatæ, corporis dimidio non longiores; articulus septimus-decimus minimus. Thorax fere ellipticus. Alæ sat latæ; *vena subanalis furcata.* Halteres breves. Abdomen thorace multo longius. *Pedes* latiusculi, sat breves, subpubescentes; *tibiæ calcaribus minimis, non spinosæ.*

Body linear, nearly bare, rather short. Head round, flat above. Eyes reniform. Ocelli three; the middle one small, in front. Palpi four-jointed. Antennæ stout, sixteen-jointed, rather less than half the length of the body. Thorax nearly elliptical. Wings moderately broad; subcostal vein ending at a little beyond two-thirds of the length of the wing. Radial emerging from the subcostal at half the length of the

latter, forming an obtuse angle near its base, and after an inward curve, ending at about four-fifths of the length; cubital proceeding from the angle of the radial, straight from thence to its end, which is a little in front of the tip of the wing; subapical emerging from the pobrachial transverse veinlet, forked beyond half its length; *subanal forked*, forming the præbrachial and the pobrachial; anal and axillary incomplete; humeral veinlet near the base. Areolets thirteen—the humeral, the radical, the subcostal, the radial, the præbrachial, which is united to the pobrachial, the cubital, the subapical, three externo-medial, the anal, the axillary and the subaxillary one; the three last are incomplete. Posterior margin forming a curve at beyond twice the length of the humeral areolet from the base. Halteres short. Abdomen much longer than the thorax. *Legs* rather short and stout, minutely pubescent; *tibiæ without spines, their spurs very minute;* tarsi not longer than the tibiæ.

The only British species of this genus lives in woods, and is less active than the other *Mycetophilidæ*. The larva feeds on fungi.

1. **pallipes,** Meig.! Zw. i. 230. 1. pl. 8. f. 10 (1818); Mcq.; Winn. Nigra, alis sublimpidis, halteribus pedibusque testaceis, abdomine piceo. Long. 2; alar. 4 lin.

Black. Wings almost limpid. Halteres testaceous. Abdomen piceous. Legs testaceous.

Rare. Inhabits decayed trunks of trees. (E. I.)

Genus XII. **SCIARA.**

SCIARA, Meig. Kl. Zw. vi. (1830); Zett.; Stæg. *Tipula* p., L.; F. E. S.; Geoff.; Gmel. *Chironomus* p., F. *Sciara* p., Meig. Zw. i. F. *Hirtea* p., F. S. A. *Molobrus*, Latr.; Mcq.

Corpus parvum, sæpissime nigrum. Caput parvum. Proboscis prominula. Labium bilobum. Oculi emarginati. Ocelli tres, medius minimus, antepositus. Palpi triarticulati, incurvi. *Antennæ* 16-*articulatæ*, subfiliformes. Thorax subellipticus. *Alæ* angustæ, immaculatæ; *vena subcostalis brevis; cubitalis et subanalis simplices;* subapicalis furcata. Halteres longiusculi. Abdomen elongatum. Pedes vix elongati; *tibiæ non spinosæ, calcaribus breviusculis. Mas.* Antennæ corpore vix breviores. Abdomen apice bilobum. *Fœm.* Antennæ corporis dimidio non longiores. Abdomen apice attenuatum.

Body small, very generally black. Head small. Proboscis somewhat prominent. Labium bilobed. Eyes emarginate. Ocelli three, the middle one in front, very small. Palpi three-jointed, curved downward. *Antennæ sixteen-jointed*, nearly filiform. Thorax nearly elliptical. Wings more or less narrow, blackish or limpid, not spotted; *sub-*

costal vein little more than one-fourth of the length of the wing; radial a little more than two-thirds of the length; *cubital simple*, ending at a little in front of the tip; subapical emerging from the cubital before one-third of the length, forked before two-thirds of the length; subanal and anal diverging to the posterior margin; *subanal simple;* axillary and subaxillary rudimentary; humeral veinlet very near the base. Areolets ten—the humeral, the subcostal and the radial, which are partly united, the præbrachial, the pobrachial, the cubital, the subapical, one externo-medial, the anal, and the axillary. Posterior margin forming a slight acute angle at a little beyond the length of the humeral areolet from the base. Halteres rather long. Abdomen elongated, nearly linear. *Legs* slender, of moderate length; coxæ rather large; *tibiæ without spines, their spurs rather short. Male.* Antennæ nearly as long as the body. Abdomen bilobed at the tip. *Fem.* Antennæ not more than half the length of the body. Abdomen attenuated at the tip.

The larvæ of this genus dwell in *Boleti,* fungi, putrescent galls, and beneath the bark of felled trees, and at the decayed roots of vegetables. The larva of *S. vitripennis* is exactly like that of *Mycetophila fusca,* but does not spin a cocoon; the pupa differs in having two divergent caudal setæ, and its head is cleft in front. Synopsis of the species:—

a. Radial vein extending beyond the fork of the subapical.
  b. Wings blackish.
    c. Sides of the abdomen luteous. Species 1.
    c c. Sides of the abdomen black. Species 2.
  b b. Wings grey.
    c. Legs piceous. Species 3.
    c c. Legs testaceous. Species 4, 5.
  b b. Wings nearly limpid. Species 6.
a a. Radial vein extending to the fork of the subapical. Species 7, 8.
a a a. Radial vein not extending to the fork of the subapical.
  b. Halteres piceous or brown.
    c. Wings brown. Species 9.
    c c. Wings grey. Species 10.
    c c c. Wings limpid, or nearly so.
      d. Subapical and subanal veins dark. Species 11, 12.
      d d. Subapical and subanal veins whitish. Species 13, 14.
  b b. Halteres testaceous, with blackish knobs. Species 15, 16.
  b b b. Halteres testaceous or whitish.
    c. Wings complete.
      d. Body black or brown.
        e. Subapical and subanal veins blackish. Species 17.
        e e. Subapical and subanal veins pale.
          f. Body rather slender. Species 18, 19.
          f f. Body very slender. Species 20.
      d d. Body tawny. Species 21.

d d d. Body testaceous. Species 22, 23.
c c. Wings imperfect. Species 24.

1. **Thomæ,** L. S. N. ii. 976 (1767); F.; Gmel.; Panz.; Latr.; Meig.; Mcq.; Gim.; Stæg.; Zett.; Guér.—*lateralis,* Meg.; Meig. Atra, antennis nigris, abdominis lateribus luteo vittatis. Long. 3; alar. 6 lin.

Deep black. Wings black; radial vein extending beyond the fork of the subapical, and much beyond half the length of the wing. Abdomen with a luteous stripe on each side.

Common. For the habits of the larva, see Guérin (Ann. Soc. Ent. Fr. 2me Sér. iv. Bull. viii.), and other authors. (E. S. I.)

2. **Morio,** F. E. S. iv. 275. 18 (1792); Meig.; Mcq.; Zett.; Gim.; Stæg.—*florilega,* Meig. Kl.—*forcipata,* F.; Gmel. Nigra, alis nigricantibus, pedibus piceis. Long. 2; alar. 4 lin.

Black. Wings blackish, darkest along the costa; medial vein ending at much beyond the fork of the subapical, and much beyond half the length of the wing.

Common. (E. S. I.)

3. **fuscipes?** Meig. Zw. i. 280. 5 (1818); Zett.; Gim.; Stæg. Nigra, alis cinereis, halteribus testaceis apice nigris, pedibus piceis, femoribus tibiisque anticis testaceis. Long. 1½; alar. 3 lin.

Black. Wings dark grey; radial vein extending beyond the fork of the subapical and much beyond half the length of the wing. Halteres testaceous, with blackish knobs. Legs piceous; fore femora and fore tibiæ testaceous.

Common. (E. S. I.)

4. **brunnipes,** Meig. Zw. i. 286. 25 (1818); Mcq.; Gim.; Rs.; Zett. Picea, gracilis, capite antennisque nigris, *thorace vittis tribus cinereis,* alis cinereis, halteribus testaceis apice fuscescentibus, pedibus testaceis, tarsis nigricantibus. Long. 1½–2; alar. 3–4 lin.

Piceous, slender. Head and antennæ black, the latter slender, of moderate length. *Thorax with three cinereous stripes.* Wings grey; veins blackish; radial vein ending at very much beyond half the length of the wing, and a little beyond the fork of the subapical; subapical and hinder veins distinct, the former pale before its fork. Halteres testaceous, with brownish tips. Legs testaceous, rather long; tibiæ darker than the femora; tarsi blackish.

Generally distributed. (E. S. I.)

5. **nitidicollis,** Meg.; Meig. Zw. i. 281. 8 (1818); Mcq.; Zett.; Stæg. Nigra, *thorace nitido,* alis cinereis, halteribus testaceis apice nigris, pedibus testaceis, tarsis nigricantibus. Long. 1–1½; alar. 2–3 lin.

Black. *Thorax shining.* Wings grey; veins blackish; radial vein extending a little beyond half the length of the wing, and very little beyond the fork of the subapical. Halteres testaceous with black knobs. Legs testaceous; trochanters and tarsi blackish.

Not common. (E.)

6. **caudata,** Walk. C. D. B. M. i. 106 (1848). Nigra, nitens, alis sublimpidis, halteribus pedibusque testaceis, trochanteribus tarsisque nigricantibus; *Fœm.* abdomine longissimo. Long. 3; alar. 4 lin.

Fem. Black. Thorax shining. Wings nearly limpid; radial and cubital veins blackish, the others pale; radial vein extending beyond half the length of the wing and a little beyond the fork of the subapical vein. Halteres and legs testaceous. Abdomen much elongated, about six times the length of the thorax. Trochanters and tarsi blackish.

Rare. In the British Museum. (E.)

7. **pallipes,** F. E. S. iv. 248. 69 (1792); Meig.; Gim. *Nigra,* alis sublimpidis, venis nigricantibus, halteribus pedibusque testaceis, trochanteribus tarsisque nigricantibus. Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Black. Wings nearly limpid; veins blackish; subapical vein pale before its flexure; radial extending to the fork of the subapical, and much beyond the half of the length of the wing. Halteres and legs testaceous; trochanters and tarsi blackish.

Common. (E. I.)

8. **hyalipennis,** Meig. Zw. i. 285. 21 (1818); Gim.; Stæg.; Zett. *Picea, thorace vittis cinereis,* alis sublimpidis, venis nigricantibus, halteribus pedibusque testaceis, tarsis nigricantibus. Long. 1; alar. 2 lin.

Piceous. Thorax with cinereous stripes. Wings nearly limpid; veins blackish; subapical vein pale before its fork; radial vein extending to the fork of the subapical, and beyond half the length of the wing. Halteres and legs testaceous; tarsi blackish.

Common. (E. S. I.)

9. **præcox,** Meig. Zw. i. 279. 4 (1818); Mcq.; Stæg.; Zett. Nigra, alis fuscis, venis nigris, halteribus abdomine pedibusque piceis. Long. $1\frac{1}{2}$; alar. $3\frac{1}{2}$ lin.

Black. Antennæ rather short and stout. Wings brown; veins black; radial vein ending at beyond half the length and very little before the fork of the subapical; subapical and subanal veins distinct. Halteres, abdomen and legs piceous. Legs rather stout.

Common. (E. S. I.)

10. **fuscipennis,** Meig. Zw. i. 282. 11 (1818); Stæg.; Zett. Nigra, alis cinereis, venis nigris, halteribus pedibusque piceis. Long. 1; alar. $2\frac{1}{2}$ lin.

Black. Antennæ rather stout, pubescent. Wings grey; veins black; præbrachial vein ending at about half the length of the wing, and a little before the fork of the subapical vein. Halteres and legs piceous.

Not common. (E.)

11. **vitripennis?** Hoffm.; Meig. Zw. i. 281. 9 (1818); Mcq.; Gim. Nigra, gracilis, *mediocris,* alis sublimpidis, venis nigris, halteribus pedibusque fuscis, tarsis nigricantibus. Long. 1; alar. 2 lin.

Black, slender, *of moderate size.* Wings nearly limpid; radial and cubital veins black, the other veins blackish; radial vein not extending to half the length of the wing, and not near to the fork of the subapical; subapical pale before its fork. Halteres and legs brown; tarsi blackish.

Common. (E. S. I.)

12. **minima,** Meig. Zw. i. 282. 14 (1818); Mcq.; Gim. Nigra, *minima,* alis sublimpidis, venis nigricantibus, pedibus fuscescentibus, tarsis nigris. Long. $1\frac{1}{2}$; alar. 1 lin.

Black, *very small.* Wings nearly limpid; veins blackish; radial vein not extending to half the length of the wing, nor to the fork of the subapical vein. Legs brownish; tarsi black.

Not common. (E.)

13. **scatopsoides,** Meig. Zw. i. 282. 13 (1818); Zett. Nigra, alis limpidis, *vena radiali ad costæ medium terminata.* Long. $1\frac{1}{4}$; alar. $2\frac{1}{2}$ lin.

Black. Wings limpid; radial and cubital veins black, the rest whitish; *radial vein ending at about half the length of the wing* and before the fork of the subapical.

Not common. (E.)

14. **fenestrata,** Meig. Zw. i. 281. 10 (1818); Stæg.; Zett. Nigra, alis sublimpidis, *vena radiali costæ medium non attingente,* halteribus pedibusque piceis. Long. 1; alar. 2 lin.

Black. Wings nearly limpid; radial and cubital veins brown, the rest pale; *radial vein not extending to half the length of the wing,* nor to the fork of the subapical. Halteres and legs piceous.

Not rare. (E.)

15. **fucata,** Mcq.; Meig. Zw. i. 280. 6 (1818); Mcq.; Gim.; Stæg.; Zett. *Picea, thorace vittis cinereis,* alis cinereis, venis nigris, halteribus testaceis apice nigricantibus, pedibus testaceis, tarsis nigris. Long. $1\frac{1}{2}$; alar. 3 lin.

Piceous. Thorax with greyish stripes. Wings grey; veins black; radial vein ending at a little before half the length of the wing, and much before the fork of the subapical vein. Halteres testaceous, with blackish knobs. Legs dull, testaceous; tarsi black.

Common. (E. S. I.)

16. **pulicaria,** Hoffm.; Meig. Zw. i. 282. 12 (1818); Mcq.; Zett.; Gim.; Stæg. *Nigra,* alis sublimpidis, venis nigricantibus, halteribus testaceis apice nigricantibus, pedibus testaceis, tarsis nigricantibus. Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Black. Wings nearly limpid; veins blackish; subapical vein pale before its fork; radial vein ending at a little before half the length of the wing, and much before the fork of the subapical vein. Halteres testaceous, with blackish knobs. Legs testaceous; tarsi blackish.

Common; has been reared from putrescent galls. (E. S. I.)

17. **longipes,** Meig. Zw. i. 286. 24 (1818); Mcq.; Gim.; Stæg.; Zett. Nigra, thorace vittis cinereis, alis limpidis, venis nigricantibus, halteribus pedibusque testaceis, abdomine piceo, tarsis nigricantibus. Long. $\frac{3}{4}$–1; alar. $1\frac{1}{2}$–2 lin.

Black. Antennæ of the male nearly as long as the body. Thorax with indistinct cinereous stripes. Wings limpid; veins blackish; radial vein ending at half the length of the wing, and a little before the fork of the subapical; subapical and hinder veins distinct, the former paler before its fork. Halteres and legs testaceous. Abdomen piceous. Tarsi blackish.

Common. (E. S. I.)

18. **aprilina,** Meig. Zw. i. 285. 22 (1818); Zett.; Stæg. Nigra, alis limpidis, *halteribus* pedibusque *testaceis*, tarsis fuscescentibus. Long. $\frac{3}{4}$–1; alar. $1\frac{1}{2}$–2 lin.

Black. Wings limpid; radial and cubital veins brownish, the others pale; radial vein not extending to half the length of the wing, nor to the fork of the subapical. *Halteres* and legs *testaceous;* tarsi brownish.

Common. (E. S. I.)

19. **pusilla,** Meig. Zw. i. 286. 23 (1818); Gim.; Stæg.; Zett. Nigra, alis limpidis, *halteribus albidis*, abdomine piceo, pedibus testaceis, tarsis fuscescentibus. Long $\frac{3}{4}$–1; alar. $1\frac{1}{2}$–2 lin.

Black. Wings limpid; radial and cubital veins brownish; the other veins pale; radial vein ending much before half the length of the wing, not extending near to the fork of the subapical. *Halteres whitish.* Abdomen piceous. Legs testaceous; tarsi brownish.

Not rare. (E.)

20. **gracilis,** Walk. C. D. B. M. i. 109 (1848). Fusca, gracillima, capite nigro, alis sublimpidis, venis fuscescentibus, halteribus coxis femoribusque testaceis. Long. $\frac{3}{4}$–1; alar. $1\frac{1}{2}$–2 lin.

Brown, very slender. Head black. Antennæ very slender, a little shorter than the body. Wings nearly limpid; veins brownish; radial vein less than half the length of the wing, not extending to the fork of the subapical vein, the latter and the hinder veins are indistinct. Halteres, coxæ, and femora testaceous.

Frequents hothouses. (E.)

21. **flavipes,** Panz. Fn. iii. 15; Meig. (1818); Mcq.; Gim.; Stæg.; Zett. Fulva, subtus testacea, antennis nigris, alis sublimpidis, halteribus pedibusque testaceis, abdomine supra piceo, tarsis nigricantibus. Long. 2; alar. 4 lin.

Tawny, testaceous beneath. Palpi testaceous. Antennæ black, testaceous at the base. Wings nearly limpid; veins blackish; subapical vein pale before its fork; radial vein extending to half the length of the body, not to the fork of the subapical. Halteres testaceous. Abdomen piceous above. Legs testaceous, rather long; tarsi blackish.

Common. (E. S. I.)

22. **pallida,** n. Testacea, *sat gracilis*, capite antennisque nigris, alis limpidis, venis pallidis, tarsis nigricantibus. Long. $\frac{1}{2}$; alar. 1 lin.

Testaceous, *rather slender*. Head and antennæ black. Wings limpid; veins pale; radial vein much shorter than half the length of the wing, and not extending near to the fork of the subapical. Tarsi blackish.

Rare. (E.)

23. **compressa,** Walk. C. D. B. M. i. 110 (1848). Testacea, *gracillima*, capite antennisque nigris, alis limpidis, venis pallidis, tarsis fuscis; *Fœm.* abdomine elongato. Long. $1\frac{1}{4}$; alar. $1\frac{1}{2}$ lin.

Testaceous, *very slender*. Head black. Antennæ black, as long as the thorax. Wings limpid; veins pale; radial rather less than half the length of the wing, not extending to the fork of the subapical. Abdomen thrice the length of the thorax. Tarsi brown.

Rare. In the British Museum. (E.)

24. **brevipennis,** Walk. C. D. B. M. i. 110 (1848). Testacea, capite antennisque nigris, alis minimis, abdominis segmentis nigro-fasciatis, tarsis fuscis. Long. $\frac{3}{4}$; alar. $\frac{3}{4}$ lin.

Testaceous. Head and antennæ black. Wings very short and narrow. Hind borders of the abdominal segments blackish. Tarsi brown.

Rare. In the British Museum, and in the collection of Mr. Haliday. (E. I.)

Genus XIII. **EPIDAPUS.**

EPIDAPUS, Haliday, Ins. Brit. Dipt. i. 7 (1851). *Chionea* p., Hal. Curt. Guide, 1164, *b*.

Thorax e supra visus quasi conicus, postice valde compressus. *Alæ et halteres nulla.* Abdomen apud medium incrassatum, apice attenuatum decurvum; oviductus valvulis duabus ordinariis linearibus obtusis pubescentibus liberis.

Thorax much compressed behind, so as to seem conical from above. *Wings and halteres wholly obsolete.* Abdomen incrassated in the middle; tip attenuated, decurved, furnished with the ordinary two linear obtuse pubescent and free valves of the ovipositor.

1. **venaticus,** Hal. Curt. Guide, 1164[b]. 1 (1837). Nigra, gracilis, pedibus testaceis. Long. $\frac{3}{4}$ lin.

Black, slender. Legs testaceous.

Rare. Holywood, near Belfast. In Mr. Haliday's collection. (I.)

Genus XIV. **ZYGONEURA.**

ZYGONEURA, Meig. Zw. vi. 304 (1830); Mcq.; Zett.

Corpus parvum. Caput parvum. Proboscis prominula. Labium bilobum. Oculi reniformes. *Ocelli tres, medius minimus, antepositus.* Palpi triarticulati. *Antennæ* 16-*articulatæ*, moniliformes. Thorax subellipticus. *Alæ* immaculatæ, *venæ cubitalis et subanalis simplices*, venæ subapicalis furcæ valde arcuatæ. *Pedes* non elongati; *tibiæ spinis et calcaribus nullis. Mas. Antennæ verticillato-pilosæ, articulis petiolatis. Fœm.* Antennæ pubescentes, articulis approximatis.

Body small, black. Head small. Proboscis somewhat prominent. Labium bilobed. Eyes reniform. *Ocelli three, the middle one in front, very small.* Palpi three-jointed, curved downward. *Antennæ sixteen-jointed*, moniliform. Thorax nearly elliptical. Wings rather narrow, unspotted; costal vein ending at the tip of the wing; subcostal vein rudimentary; radial vein not extending to one-third of the length of the wing; *cubital simple*, ending near the tip; *forks of the subapical vein much curved, especially the fore one; subanal vein simple;* anal vein much curved downward. Halteres rather long. Abdomen moderately long. *Legs* not long; coxæ rather large; *tibiæ with no spines nor spurs. Male. Antennæ verticillate-pilose; joints petiolated. Fem.* Antennæ pubescent; joints sessile.

This genus resembles *Cecidomyia* in the structure of its antennæ; in other characters it is nearly allied to *Sciara*.

1. **sciarina,** Winthem; Meig. Zw. vi. 305. 1 (1830); Mcq.; Zett. Nigra, nitens, alis sublimpidis, venis nigricantibus, halteribus pedibusque testaceis, tarsis nigricantibus. Long. 1; alar. 2 lin.

Black. Thorax shining. Wings nearly limpid; veins blackish; subapical vein pale before its fork. Halteres and legs testaceous; tarsi blackish.

Not common. (E. S.)

Genus XV. **LESTREMIA.**

LESTREMIA, Mcq. D. N. (1825); Meig. Zw. vi.; Loew; Zett. *Tipula* p., F. E. S. *Chironomus* p., F. S. A. *Sciara* p., Meig. Zw. i. *Diamesa*, Meig. Zw. vi. in Tab.

Corpus gracile. Oculi emarginati. *Ocelli nulli.* Palpi breves. *Antennæ* graciles, 16-*articulatæ*. Thorax subellipticus. *Alæ* pubescentes; *vena* radialis brevis; *cubitalis et subanalis simplices;* subapicalis furcata. Abdomen oblanceolatum. *Pedes* graciles, longiusculi, *spinis calcaribusque nullis. Mas. Antennæ* moniliformes, *verticillato-pilosæ*, sat longæ. *Fœm.* Antennæ submoniliformes, pilosæ, breves. Body slender. Palpi short. Eyes emarginate. *Ocelli none. An.*

tennæ slender, fifteen-jointed. Thorax nearly elliptical. *Wings* pubescent, moderately broad; radial vein ending at one-third of the length of the wing, connected near its tip with the cubital by an oblique transverse veinlet; *cubital simple*, ending at a little beyond three-fourths of the length; subapical forked at some distance beyond the tip of the radial; subanal simple; anal distinct, curved towards the hind border. Abdomen oblanceolate. Halteres rather long. *Legs* slender, rather long, *without spines or spurs. Male. Antennæ* moniliform, *verticillate-pilose*, moderately long, sixteen-jointed. *Fem.* Antennæ submoniliform, pilose, rather short, eleven-jointed. Abdomen longer than that of the male.

This genus connects the *Mycetophilidæ* with the following family, with which latter it agrees in the structure of its antennæ and of its legs, but resembles *Sciara* in the veins of the wings.

1. **leucophæa,** Meig. Zw. i. 288. 31 (1818); Meq.; Zett.—*juniperinus?* F. Capite antennisque nigris, *alis limpidis*, venis pallidis, halteribus pedibusque testaceis; *Mas, fusca; fœm. testacea, thoracis disco cinereo-fusco.* Long. 1–1½; alar. 2–3 lin.

Head and antennæ black. *Wings limpid;* veins pale. Halteres and legs testaceous. *Male. Body brown. Fem. Body testaceous; disc of the thorax greyish-brown.*

Not rare. (E. S. I.) Mr. Haliday has observed that it appears earlier in the year than the following species, and occurs chiefly in groves of larches.

2. **cinerea,** Meq. H. N. D. i. (1830); Zett. *Nigro-cinerea*, antennis nigris, *alis cinereis*, femoribus tibiisque obscure testaceis, tarsis nigris. Long. 1¼; alar. 3½ lin.

Blackish-grey. Antennæ black. *Wings grey.* Femora and tibiæ dingy testaceous; tarsi black.

"Not very rare. Near Cork in September and October. On grass both in open places and on the borders of groves."—*Hal. MSS.*

Genus XVI. **CECIDOGONA.**

Lestremia (Subgen. *Cecidogona*), Loew, Ent. Zeit. Stett. v. 324 (1844).

Corpus gracile. Oculi emarginati. *Ocelli nulli.* Palpi breves. *Antennæ* graciles, 11-*articulatæ.* Thorax subelliptica. *Alæ* pubescentes; *vena* radialis brevis; *cubitalis et subanalis simplices;* subapicalis furcata. Abdomen oblanceolatum. *Pedes* graciles, longiusculi, *spinis calcaribusque nullis;* metatarsi elongati. *Mas.* Antennæ moniliformes, verticillato-pilosæ. *Fœm.* Antennæ submoniliformes, pilosæ, breves.

Body slender. Eyes emarginate. *Ocelli none.* Palpi short. *Antennæ* slender, *eleven-jointed.* Thorax nearly elliptical. *Wings* pubescent; subcostal vein joining the costa at about four-fifths of the length of the wing; radial short; *cubital simple;* subapical forked much beyond the middle of the wing; *subanal simple;* anal complete. Abdomen oblanceolate. *Legs* slender, rather long, *with no spines or spurs;* metatarsi very long. *Male. Antennæ moniliform, verticillate-pilose. Fem.* Antennæ submoniliform, pilose, short.

1. **carnea,** Loew, Ent. Zeit. Stett. v. 324 (1844). Carnea, thorace superne articulisque flagelli antennarum fuscis, abdominis maculis quadratis pedibusque fuscescentibus. Long. 1; alar. 2 lin.

Brown. Antennæ black. Wings nearly limpid; veins pale, black towards the costa. Halteres whitish. Legs testaceous; tarsi brown. *Fem.* Abdomen testaceous beneath; incisures testaceous.

Rare. Not local. (E. S. I.)

Genus XVII. **CATOCHA.**

CATOCHA, Hal. E. M. i. 156 (1833). *Macrostyla*, Winn. *Lestremia* p., Zett.

Mas et Fœm. Caput parvum, subrotundum. Frons lata. Oculi rotundi. *Ocelli tres, frontales, inæquales,* in triangulum dispositi. *Antennæ* porrectæ, moniliformes; articulus primus cyathiformis; secundus cupuliformis; tertius et sequentes discreti. Thorax ovatus, convexus. Scutellum magnum, semilunatum. *Alæ* latæ, obtusæ, pubescentes, incumbentes, margine postico sat late ciliato; *venæ cubitalis et subanalis simplices.* Halteres magni. Abdomen segmentis 8, gracile, cylindricum, apice acuminatum. *Pedes* longi, pubescentes, *spinis et calcaribus nullis. Mas. Antennæ* 16-*articulatæ,* articulis globosis remotis pilosis. *Fœm. Antennæ* breviores, 10-*articulatæ,* articulis ovatis.

Fem. Head small, nearly round. Front broad. Eyes lunate, nearly meeting above. *Ocelli three,* on the front, of unequal size, the middle one small, in advance of the others. Antennæ porrect, moniliform; first and second joints cyathiform; third and tenth elongate, oval; the rest oval. Thorax oval, convex. Scutellum large, semilunate. *Wings* broad, obtuse, pubescent, with a rather broad fringe on the hind border; subcostal vein ending at about half the length of the wing; *cubital simple,* ending at hardly in front of the tip, springing near the base of the wing from an angle formed by two oblique veinlets; subapical forked near its tip, its fore fork ending at very little behind the tip of the wing; subanal and anal veins extending to the border; *subanal simple.* Halteres large. Abdomen with eight segments, slender, cylindrical, acuminated at the tip. *Legs* long, pubescent, *with no spurs or spines. Male. Antennæ*

sixteen-jointed, verticillate-pilose, about as long as the wings; first and second joints contiguous, the rest disjoined by a petiole formed by the constricted apex of the joints (the last excepted). Palpi pendulous, not so long as the fore coxæ, with three joints appearing externally, which are oblong-ovate, the last a little longer than the preceding. Abdomen with seven segments, and a forceps, the arms of which are thick, two-jointed; the second joint not unguiculate, but slightly toothed. *Fem. Antennæ* shorter, *ten-jointed;* third and tenth joints elongate-oval; fourth and following joints oval.

1. **latipes,** Hal. E. M. i. 156 (1833); Winn. *Mas et Fœm.* Nigra, antennis pallide fusco-flavis, basi nigris, thorace nitido, alis hyalinis, halteribus fuscis, abdomine sordide fusco-flavo, incisuris nigricantibus, pedibus pallide fusco-flavis; *Fœm.* tarsorum articulis tertio, quarto, et quinto dilatatis. Long. 1; alar. 2 lin.

Male and Fem. Black, pubescent. Antennæ pale brownish-yellow, black at the base. Thorax shining. Wings limpid. Halteres brown. Abdomen dingy, brownish-yellow; sutures black. Legs pale brownish-yellow. *Fem.* Third, fourth, and fifth joints of the tarsi dilated. In the recent insect the body is bluish-black, a little rufescent under the wings.

Rare. In the collection of Mr. Haliday. (I.)

2. **brevinervis?** Zett. D. S. x. 3770. 3 (1851). Obscure rufescens, antennis nigricantibus thorace brevioribus, abdomine pallide rufo, pedibus pallidis. Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Dusky reddish. Abdomen brighter. Antennæ blackish, shorter than the thorax. Legs pale.

Mr. Haliday has forwarded to me this description of a specimen (since lost), which he supposes to be identical with the above species. Cork. (I.)

Genus XVIII. **ANARETE.**

ANARETE, Hal. E. M. i. 156 (1853). *Lestremia* p., Meig. *Sciara* p., Zett.

Oculi emarginati. *Ocelli tres. Antennæ breves, 9-articulatæ*, articulis duobus basceos majoribus. Alæ incumbentes, nudæ; vena costæ mediæ inserta. *Tibiæ ecalcaratæ.*

Eyes emarginate. *Ocelli three. Antennæ short, with nine joints;* first and second joints thicker than the following. Wings incumbent, bare; subcostal vein half the length of the wing; *cubital and subanal simple. Tibiæ without spurs.*

1. **candidata,** Hal. E. M. i. 156 (1833).—*albipennis*, Meig.—*coracina*, Zett. Atra, alis niveis, pedibus pallidis, tibiis tarsisque posticis albis. Long. 1; alar. 2 lin.

Glossy black, nearly as large as *Lestremia leucophæa*, from which it differs principally by the antennæ; the wings are alike in neuration. Wings pure white; veins colourless, except the two subcostal, which are rosy in newly-disclosed specimens. Legs pale, much longer in the male than in the female; hind tibiæ and tarsi white.

Rare. (E. I.)

Genus XIX. **CAMPYLOMYZA.**

CAMPYLOMYZA, Wied.; Meig. Zw. i. 101 (1818); Mcq.; Westw.; Stæg. *Cecidomyia* p., Meig. Kl. Zw. *Campylomyia*, Zett. *Porricondyla ?* Rondani.

Corpus oblongum, parvum aut minimum, plerumque nigrum. Caput parvum. Oculi remoti. *Ocelli tres.* Proboscis brevis, arcuata. Palpi parvi, porrecti, arcuati. Antennæ 11–20-articulatæ, moniliformes, porrectæ. Thorax ovatus. Alæ mediocriter longæ, sat latæ; vena costalis cum cubitali ad alæ apicem terminata; mediastinalis obsoleta; subcostalis alæ dimidio paullo brevior; venula obliqua transversa subcostalem et cubitalem connectens; vena subapicalis fere obsoleta; subanalis distincta, analis angulata aut subobsolete furcata. Halteres parvi. Abdomen segmentis 8. Pedes sat graciles, non elongati; metatarsus elongatus. *Mas.* Antennæ moniliformes, corporis longitudine; articuli globosi, remoti, pilosi. Abdomen lineare. *Fœm.* Antennæ submoniliformes, corpore multo breviores; articuli approximati, pubescentes. Abdomen lanceolatum, valvulis duabus apicalibus.

Body oblong, small, or very minute, generally black. Head small, sessile. Eyes remote. *Ocelli three.* Proboscis curved. Palpi small, porrect, curved. Antennæ eleven- to twenty-jointed, moniliform, porrect. Thorace oval. Wings moderately long, rather broad; cubital vein ending at the tip of the wing; mediastinal obsolete; subcostal less than half the length of the wing, connected near its tip with the cubital by an oblique transverse veinlet; cubital nearly straight, ending at the tip of the costal; subapical almost obsolete; subanal distinct, nearly straight; anal forming with its second branch a slightly obtuse angle, its first branch nearly obsolete, contiguous to the anal vein. Halteres rather short. Abdomen with eight segments. Legs of moderate length and thickness; joints of the tarsi from the first to the fourth successively decreasing in length. *Male.* Antennæ moniliform, as long as the body; joints globose, remote, pilose. Abdomen linear. *Fem.* Antennæ submoniliform, much shorter than the body; joints approximate, pubescent. Abdomen lanceolate, with two apical valves.

The *Campylomyzæ* abound in hedges and woods, and are not uncommon on windows. In their habits they are allied to the *Sciaræ*, as well as to the *Cecidomyiæ*.

a. Wings grey. Species 1.
a a. Wings nearly limpid.
b. Veins blackish. Species 2, 3.
b b. Veins pale testaceous. Species 4.
a a a. Wings white-hyaline. Species 5.

1. **atra,** Meig. Kl. Zw. i. 40. 4 (1803); Stæg.; Zett. *Nigra*, alis cinereis nigro-pubescentibus, *halteribus abdomine pedibusque piceis.* Long. 1–2; alar. 3–4 lin.

Black. *Wings grey*, with black pubescence; veins black; subcostal vein between the transverse veinlet and its tip rather more than twice the length of the subcostal vein. *Halteres, abdomen, and legs piceous.*

Not rare. (E. S. I.)

2. **flavipes,** Meig. Zw. i. 102. 1 (1818).—*pallipes?* Zett. Nigra, *alis sublimpidis, venis nigricantibus, halteribus pedibusque testaceis.* Long. $\frac{3}{4}$–1; alar. 2–2$\frac{1}{2}$ lin.

Black. *Wings nearly limpid; veins blackish; subcostal vein between the transverse veinlet and its tip about thrice the length of the transverse veinlet. Halteres and legs testaceous.*

Generally distributed. (E. S. I.)

3. **bicolor,** Wied. MSS.; Meig. Zw. i. 102. 2 (1818); Meq.; Stæg.; Zett. Nigra, *alis sublimpidis, venis nigricantibus, halteribus abdominis suturis pedibusque pallide testaceis, abdomine piceo.* Long. $\frac{1}{2}$–$\frac{3}{4}$; alar. 1–1$\frac{1}{2}$ lin.

Black. Wings nearly limpid; veins blackish; subcostal vein between the transverse veinlet and its tip about four times the length of the transverse veinlet. Halteres, sutures of the abdomen and legs, pale testaceous. Abdomen piceous.

Generally distributed. (E. S. I.)

4. **Aceris,** Meig. Zw. i. 102. 4 (1818); Meq.; Stæg.; Zett. Nigra, *alis limpidis, venis, halteribus pedibusque pallide testaceis.* Long. $\frac{1}{4}$–$\frac{1}{3}$; alar. $\frac{1}{2}$–$\frac{2}{3}$ lin.

Black. *Wings limpid; veins, halteres, and legs pale testaceous.*

Not rare. (E.)

5. **globifera,** Hal. MSS. "Atra, opaca, *alis albis*, halteribus et pedibus fusco-flavidis, antennis 11-articulatis; *Mas*, antennarum articulo secundo maximo subgloboso, flagello apice attenuato. Long. ♂ $\frac{3}{4}$, ♀ $\frac{5}{6}$; alar. 1$\frac{1}{3}$ lin.

"Deep black, not glossy. Antennæ scarcely as long as the thorax, eleven-jointed, fuscous; first two joints black. In the male the second joint is very large, oblate-globose; the interior joints of the flagellum subglobose, beset with a few long hairs, the exterior joints much more slender, so that the antennæ might be described as moniliform-setaceous. In the female the joints of the flagellum are subovate-globose, but faintly pubescent, of nearly equal thickness (moniliform-linear).

Wings white-hyaline, the costal and two anterior veins light brown, the posterior veins colourless; the oblique transverse veinlet is about as long as the apical portion of the first vein, which it intersects. Halteres and legs dingy yellowish. Abdomen long; the posterior segments in the female not so much attenuated as usual; the eighth and ninth largely exserted, dingy yellow; the terminal tentacles more dusky, two-jointed; the second joint smaller, orbiculate; beneath them a compressed obtuse process nearly as long. The forceps of the male unguiculate." —*Hal. MSS.*

On short grass at Holywood, etc. In Mr. Haliday's collection. (I.)

Genus XX. **DITOMYIA.**

DITOMYIA, Winnertz, Ent. Zeit. Stett. vii. 14 (1846); Ruthe. *Mycetobia* p., Meig.; Stæg.; Meq. *Symmerus*, Walk.

Corpus elongatum, gracile. Caput parvum. Oculi rotundi, hemisphærici. Ocelli tres; intermedius parvus, non antepositus. Palpi biarticulati; articulus primus crassus, ovatus; secundus oblongus. Antennæ 17-articulatæ, compressæ; articulus primus cyathiformis; secundus transversus; sequentes ovato-cylindrici. Thorax ovatus. *Alæ pilosæ*, mediocriter latæ; *vena cubitalis furcata.* Halteres breves. Abdomen segmentis 7. *Pedes* longi, graciles, *tibiæ spinis minimis, calcaria mediocria. Mas.* Abdomen lineare. *Fœm.* Abdomen apicem versus subdilatatum.

Body long, slender. Head small. Eyes round. Ocelli three, the middle one small, in a straight line with the others. Palpi with two joints; the first thick, oval; the second oblong. Antennæ seventeen-jointed, compressed; first joint cyathiform; second transverse; the following ovate-cylindrical. Thorax oval. *Wings pilose*, moderately broad; subcostal vein rudimentary; radial ending at about four-fifths of the length; *cubital forked* before the end of the radial, its fore fork rather long, ending at some distance beyond the radial; hind fork ending at the tip of the wing; subapical emerging from the cubital at before the connection of the latter with the radial, forked at a little before one-third of its length; externo-medial nearer to the subapical than to the subanal, which is curved hindward; anal extending to the border. Halteres rather short. Abdomen long, slightly compressed. Legs long; *tibiæ with very minute spines, armed at the tips with moderately long spurs. Male.* Abdomen linear. *Fem.* Abdomen slightly widened towards the tip.

This genus is nearly allied to *Platyura;* the larvæ feed on *Boleti.*

1. **fasciata,** Meig. Zw. i. 230. 2 (1818). Flava, antennis fuscis basi flavis, thorace vittis tribus fuscis, *alis subcinereis fasciis duabus*

hyalinis, abdomine nigro-fusco, incisuris apicequc flavis, tarsis fuscis. Long. 2; alar. 4 lin.

Yellow. Antennæ brown, yellow at the base; as long as the thorax. Thorax with three brown stripes, the lateral pair shortened in front. *Wings greyish, with two hyaline bands.* Abdomen blackish-brown; sutures and tip yellow. Tarsi brown.

Rare. "Inhabits decaying stumps bearing *Boleti* in copses." —*Meig.* In the collection of Mr. Clifton. (E.)

2. **ferruginea,** Walk. C. D. B. M. i. 88 (1848). *Fulva*, antennis *abdominisque fasciis fuscis*, alis subcinereis, pedibus testaceis. Long. 4; alar. 7 lin.

Pale tawny. Antennæ brown, testaceous towards the base. Wings slightly greyish. Abdomen with a broad brown band on the hind border of each segment. Legs testaceous; femora paler than the tibiæ.

Rare. In the British Museum. (E.)

3. **vittata,** n. *Testacea*, antennis, thoracis fasciis tribus, abdominis vitta dorsali tarsisquc fuscis, alis subcinereis. Long. $2\frac{1}{4}$; alar. 5 lin.

Testaceous. Antennæ brown, testaceous at the base. Thorax with three brown stripes, the middle one in advance of the others, broadest in front. Wings very slightly greyish. Abdomen with a brown dorsal stripe. Tarsi brown.

Rare. (E.)

Genus XXI. **PLATYURA.**

PLATYURA, Meig. Zw. i. 231 (1818); Curt.; Mcq.; Zett. *Ceroplatus* p., F.; Latr. *Rhagio* p., F. *Sciara* p., F. *Asindulum* p., Latr. *Ceroplatus* p., Zett.

Corpus angustum, longum. Caput parvum. Proboscis brevis. Oculi rotundi. Ocelli tres, intermedius minimus. Palpi 4-articulati; articulus quartus longus, linearis. *Antennæ* 17-articulatæ, *breves, validæ.* Thorax brevis, subelliptieus. *Alæ nudæ*, medioeriter latæ; *vena cubitalis furcata.* Halteres breves. Abdomen depressum, thorace triplo longius. *Pedes* graciles, longiusculi; *tibiæ non spinosæ; calcaria brevia.*

Body narrow, long. Head small. Proboscis short. Eyes round. Ocelli three, the middle one very small. Palpi four-jointed; first joint small; second robust; third large; fourth long, linear. *Antennæ short, stout*, seventeen-jointed, less than half the length of the body; *joints transverse.* Thorax short, nearly elliptical. *Wings bare*, moderately broad; subcostal vein slightly curved forward towards its tip, ending at very little beyond one-third of the length of the wing; radial straight, ending at a little before two-thirds of the length; *cubital forked*, connected with the radial at before one-third of the length, when it forms

a curve near its junction with the præbrachial transverse, and is very slightly curved from thence to its end, which is very little in front of the tip of the wing; its fore fork is more or less oblique; subapical emerging from the cubital at half the length of the wing, forked at one-third of its length from thence to its end, its fore fork ending at very little behind the tip of the wing; subanal forked at one-third of the length of the wing, its hind fork curved hindward, and diverging much from the fore one; anal extending to the hind border; subaxillary not reaching the hind border; humeral veinlet near the base; areolets thirteen,—the humeral, the radical, the subcostal, the radial, the probrachial, which is united to the pobrachial and shortened towards the tip, the two cubital, three externo-medial, the anal, the axillary, and the subaxillary. Posterior margin forming a slight and very acute angle at twice the length of the humeral areolet from the base. Halteres short. Abdomen somewhat depressed, about thrice longer than the thorax. *Legs* rather long and slender; *tibiæ without spines, their spurs short. Male.* Abdomen nearly linear and cylindrical. *Fem.* Abdomen elongate-obclavate or subfusiform.

These flies are similar to the *Mycetophilæ* in their habits; most of the species inhabit woods, and their larvæ feed on fungi. The species may be grouped thus:—

a. Fork of the cubital vein joining the radial. Species 1.
a a. Fork of the cubital vein joining the costal.
  b. Fork of the cubital vein rather long.
    c. Fork of the cubital vein curved. Species 2–4.
    c c. Fork of the cubital vein straight. Species 5, 6.
  b b. Fork of the cubital vein short.
    c. Wings spotted. Species 7–10.
    c c. Wings not spotted. Species 11–14.

1. **marginata,** Meig. Zw. i. 232. 1 (1818); Mcq. Nigra, palpis pedibusque testaceis, alis subcinereis macula disculi marginibusque obscurioribus, halteribus tibiisque fulvis, tarsis fuscis; *Fœm.* abdominis fasciis ferrugineis. Long. $3\frac{1}{2}$–4; alar. $5\frac{1}{2}$–6 lin.

Black, shining. Palpi tawny. Antennæ a little longer than the thorax. Wings greyish, clouded with grey towards the tips and along the hind border, and with a slight brownish spot at the base of the subapical vein. Halteres tawny. Abdomen long. Legs testaceous; tibiæ tawny; tarsi brown. *Fem.* Wings with the discal brownish spot almost obsolete. Fore borders of the abdominal segments ferruginous.

Not common. (E.)

2. **atrata,** F. S. A. 16. 3 (1805); Meig.; Mcq. *Nigra, alis cinereis macula antica subapicali fusca,* halteribus testaceis, femoribus tibiisque obscure testaceis, illis basi nigris. Long. 3; alar. 5 lin.

Black, shining. Antennæ stout, a little shorter than the thorax. *Wings grey, with a diffused subapical brown spot in front.* Halteres

testaceous. Legs dingy testaceous. Coxæ and femora black towards the base; tibiæ darker than the femora; tarsi black.

Rare. (E.)

3. **mycetophiloides,** Hardy, MSS. *Testacea*, vertice, antennis, thoracis disco abdominisque dorso nigris, *alis subcinereis*, abdomine fasciis testaceis, tarsis nigricantibus. Long. 3; alar. 5 lin.

Testaceous. Antennæ black, slender, as long as the thorax, testaceous at the base. Disc of the thorax black. *Wings greyish.* Halteres with tawny knobs. Legs testaceous; tarsi blackish. Abdomen black above, intermediate part with some testaceous bands.

Not common. (E. S.)

4. **nigriceps,** n. *Lutea*, capite antennisque nigris, *alis subcinereis apice paullo obscurioribus*, abdomine nonnunquam vitta tenui nigra, tarsis nigricantibus. Long. 2–3; alar. 4–6 lin.

Pale luteous. Head and antennæ black, the latter rather slender, shorter than the thorax. *Wings slightly greyish, with a grey apical streak along the cubital vein.* Abdomen occasionally with a slender black dorsal stripe. Tarsi blackish.

Not rare. (E.)

5. **laticornis,** Meig.! Zw. i. 238. 13. pl. 8. f. 19 (1818); Stæg. *Testacea*, vertice, antennis abdomineque piceis, *thorace vittis tribus ferrugineis, alis subcinereis macula subcostali apicibusque fuscis*, halteribus apice trochanteribus tarsisque fuscis. Long. 5; alar. 8 lin.

Testaceous. Vertex of the head and antennæ piceous, the latter testaceous at the base. *Thorax with three broad ferruginous stripes;* metathorax with a large ferruginous spot. *Wings slightly greyish, with a brown spot near the costa at a little beyond the middle, and with brown tips.* Halteres with brown knobs. Abdomen piceous. Femora pale testaceous; tibiæ darker; trochanters and tarsi brown.

Rare. In the British Museum. (E.) Zetterstedt supposes it to be the male of *P. lineata.*

6. **vitripennis,** Steph. MSS. *Nigra*, cano-tomentosa, palpis fulvis, *alis sublimpidis*, halteribus testaceis apice nigricantibus, pedibus testaceis, tarsis fuscis. Long. 3½; alar. 5 lin.

Black, shining, slightly covered with hoary tomentum. Palpi tawny. Antennæ hardly so long as the thorax. *Wings nearly limpid.* Halteres testaceous, with blackish knobs. Legs testaceous; tibiæ darker than the femora; tarsi brown.

Not common. (E. I.)

7. **lineata,** F. Sp. Ins. ii. 420. 4 (1781); Meig.; Zett.—*striata*, Gmel. *Fulva*, vertice antennisque piceis, palpis testaceis, thorace nonnunquam fusco-trivittato, *alis subcinereis fascia interrupta apicibusque fuscis*, halteribus testaceis apice fuscis, abdomine fusco nonnunquam fasciis testaceis, pedibus testaceis, tarsis fuscescentibus. Long. 4; alar. 6 lin.

Tawny. Head about the vertex and antennæ piceous, the latter broad, testaceous at the base. Palpi testaceous. *Wings slightly greyish, with two brown bands, the first at half the length, darkest in front, interrupted in the middle, the second apical.* Halteres testaceous, with brown knobs. Abdomen brown. Legs testaceous; tarsi brownish.

Var. β. Thorax with three brown stripes. Fore borders of the abdominal segments testaceous.

Rare. In the British Museum. (E.)

8. **antica,** n. *Nigra,* thoracis lateribus anticis halteribus, coxis femoribusque ferrugineis, *alis cinereis, fascia subapicali nigricante.* Long. 3; alar. 5 lin.

Black. Thorax ferruginous on each side in front. *Wings grey, with a blackish subapical band.* Halteres, coxæ, and femora ferruginous.

Rare. (E.)

9. **fasciata,** Latr. G. C. iv. 261 (1810); Meig.; Mcq.; Zett.; Gim.; Stæg.; Zett.—*ruficollis,* Meig.—*ochracea,* Meig. *Fulva,* antennis tarsisque fuscis, *alis subtestaceis fascia subapicali cinerea,* abdomine fasciis apiceque nigris, pedibus testaceis. Long. 2½–3; alar. 5–6 lin.

Tawny. Antennæ brown, rather slender, shorter than the thorax, tawny at the base. *Wings slightly testaceous, with a grey subapical band, which is indistinct or obsolete towards the hind border.* Abdomen with a black band on the fore border of each segment; tip black. Legs testaceous; tarsi brown.

Not rare. (E.)

10. **flavipes,** Meig. Zw. i. 237. 9 (1818); Mcq.; Curt.! B. E. 134; Guér.; Stæg.; Zett.—*nemoralis,* Meig. *Nigra,* palpis, halteribus, abdominis fasciis pedibusque testaceis, *alis subcinereis apice cinereis,* tarsis fuscescentibus. Long. 1½–2; alar. 2¾–3½ lin.

Black, shining. Palpi testaceous. Antennæ rather slender, not longer than the thorax. *Wings very slightly greyish, with grey tips.* Halteres testaceous. Hind borders of the abdominal segments more or less testaceous. Legs testaceous; tarsi brownish.

Generally distributed. (E. S. I.)

11. **unicolor,** n. *Nigra, alis fuscis basi pallidioribus,* pedibus ferrugineis, tarsis nigricantibus. Long. 3; alar. 5 lin.

Black. Wings brown, paler in the disc towards the base; veins black, ferruginous at the base. Legs ferruginous; tarsi blackish.

Rare. In the British Museum. (E.)

12. **servula,** Walk. E. M. iv. 115 (1837). *Ferruginea,* vertice, antennis, abdomine tarsisque piceis, alis subcinereis, halteribus testaceis apice piceis, pedibus testaceis. Long. 2; alar. 4 lin.

Ferruginous. Vertex, antennæ, and *abdomen piceous.* Wings greyish; branch of the cubital vein very short. Halteres testaceous, with piceous knobs. Legs testaceous; tarsi piceous.

Rare. In the British Museum. (E.)

13. **discoloria,** Meig. Zw. i. 239. 14 (1818); Mcq.—*discolor*, Wahlb.; Zett. *Fulva*, subtus testacea, palpis, halteribus pedibusque testaceis, antennis nigris, alis subtestaceis, *abdomine fasciis fuscescentibus*. Long. $1\frac{1}{2}$–2; alar. 2–4 lin.

Tawny, testaceous beneath. Palpi testaceous. Antennæ black, rather slender, shorter than the thorax. Wings with a very slight testaceous tinge. Halteres testaceous. *Fore borders of the abdominal segments more or less brownish.* Legs testaceous; tarsi brownish.

Generally distributed. Frequents the lime-tree. (E. S. I.)

14. **concisa,** n. *Nigra*, palpis, halteribus, *abdominis fasciis* pedibusque *testaceis*, pectore thoracisque lateribus piceis, *alis subcinereis*, tarsis fuscescentibus. Long. 2; alar. 4 lin.

Black. Palpi testaceous. Antennæ testaceous at the base. Pectus and sides of the thorax piceous. *Wings greyish.* Halteres testaceous. *Hind borders of the abdominal segments testaceous.* Legs testaceous; tarsi brownish.

Rare. (E.)

Genus XXII. **MACROCERA.**

Macrocera, Meig. Zw. i. 222 (1818); Curt.; Mcq.; Zett.

Corpus gracile, sublineare, longum, pubescens. Caput parvum. Oculi rotundi. Ocelli 3, intermedius parvus, ante positus. Palpi 4-articulati, breves, subincurvi. *Antennæ* 16-articulatæ, *gracillimæ, corpore æquales aut triplo longiores.* Thorax brevis, ellipticus. *Alæ* latiusculæ; *vena cubitalis furcata.* Halteres breves. Abdomen lineare aut sublineare, thorace triplo aut quadruplo longius. *Pedes longi, graciles; tibiæ non spinosæ, calcaribus minimis. Mas.* Antennæ longiores, apice pilosæ. *Fœm.* Antennæ breviores.

Body slender, pubescent, nearly linear. Head small. Eyes round. Ocelli three, the middle one very small, in advance of the others. Labium forming two large pubescent lobes. Palpi four-jointed; first joints longer than the second, or than the third; fourth as long as the first. *Antennæ* sixteen-jointed, *very slender, as long as the body, or thrice its length.* Thorax short, elliptical. Wings moderately broad; subcostal vein slightly curved forward at its tip, ending at much before half the length of the wing; radial curved upwards at its tip, ending at a little beyond half the length; *cubital forked*, springing from the radial at before one-third of the length, near which it forms a very obtuse angle at its junction with the transverse veinlet enclosing the præbrachial and pobrachial arcolets, and is slightly curved from thence to its end, which is at very little in front of the tip of the wing; its fore fork is oblique, and ends at a little beyond two-thirds of the length of the wing; subapical emerging from the cubital at before half the length, near which it is forked, and its fore fork ends at the tip of the wing;

subanal forked at one-third of the length, its hind fork curved hindward, and diverging very much from the fore one; anal extending to the hind border; subaxillary none; humeral veinlet very near the base; areolets thirteen,—the humeral, the radical, the subcostal, the radial, the præbrachial, which is united to the pobrachial and shortened towards the tip, two cubital, three externo-medial, the subapical, the anal, and the axillary. Posterior margin forming a very slight nearly right angle, at more than thrice the length of the humeral areolet from the base. Halteres short. Abdomen linear, or nearly linear, thrice or four times the length of the body. *Legs long, slender; tibiæ without spurs; their spurs very small. Male.* Antennæ longer than of the female, pilose at the tips. Abdomen cylindrical. *Fem.* Antennæ shorter. Abdomen elongate, fusiform.

The *Macroceræ* are the most elegant of all the flies of this family of Dryads. They inhabit woods, are especially fond of the shade, and may be often found resting on palings, with their long antennæ extended. Synopsis of the species:—

a. Antennæ twice or thrice the length of the body.
  b. Wings unspotted.
    c. Thorax striped. Species 1.
    c c. Thorax not striped. Species 2.
  b b. Wings spotted.
    c. Tips of the wings not clouded.
      d. Thorax not striped. Species 3.
      d d. Thorax striped. Species 4.
  c c. Tips of the wings clouded.
    d. Wings striped between the tip of the radial vein and the fork of the cubital vein. Species 5.
    d d. Wings striped before the tip of the radial vein. Species 6.
a a. Antennæ not longer than the body. Species 7.

1. **vittata,** Meig. Zw. vi. 293. 7 (1830); Zett.—*dorsalis,* Curt. Fulva, subtus testacea, palpis, halteribus pedibusque testaceis, antennis nigricantibus basi fulvis, thorace ferrugineo-trivittato, alis subtestaceis, abdomine vitta dorsali nigra, tarsis fuscis. Long. 3–4; alar. 6–8 lin.

Tawny, testaceous beneath. Palpi testaceous. Antennæ blackish, tawny at the base. Thorax with three ferruginous stripes, the lateral pair short. Wings with a very slight testaceous tinge. Halteres testaceous. Abdomen with a black dorsal stripe. Legs pale testaceous; tibiæ rather darker than the femora; tarsi brown.

Not rare. (E.)

2. **lutea,** Panz. Faun. Germ. cv. 7; Meig. Zw. i. 223. 1 (1818); Curt.; Mcq.; Zett.; Gim.; Stæg. Testacea, antennis tarsisque fuscescentibus, illis basi testaceis, alis subcinereis; *Mas,* abdominis apice fuscescente. Long 2–3; alar. 4–6 lin.—Var. Abdomen fuscescens, fasciis testaceis.

Testaceous. Antennæ brownish, testaceous towards the base. Wings very slightly greyish. Tarsi brownish. *Male.* Abdomen brownish at the tip.—Var. Abdomen brownish; hind borders of the segments testaceous.

Not rare. (E. S. I.)

3. **stigma,** Curt.! B. E. 657. 6 (1837). Testacea, antennis tarsisque fuscescentibus, alis subcinereis gutta discali strigisque fuscescentibus. Long. 3–4; alar. 6–8 lin.

Testaceous. Antennæ brownish, testaceous towards the base. Wings slightly greyish, with a brownish dot at the tip of the radial vein, and with an indistinct pale brownish streak on each areolet. Abdomen and legs pubescent; tarsi brownish.

Not rare. (E.)

4. **centralis,** Meig. Zw. i. 225. 5 (1818); Curt.; Stæg.; Zett. Testacea, antennis tarsisque fuscis, illis basi testaceis, thorace fuscotrivittato, alis subcinereis basim versus subnebulosis fasciaque media fusca, abdominis fasciis nigris. Long. 3; alar. 6 lin.

Testaceous. Antennæ brown, testaceous at the base. Thorax with three brown stripes. Wings very slightly greyish, almost limpid in the basal half, slightly clouded with brown in the disc at one-third of the length, and in the middle with a pale brown band, which does not extend to the hind border. Abdomen with a black band on the fore border of each segment. Tarsi brown.

Not rare. (E.)

5. **angulata,** Meig. Zw. i. 224. 4 (1818); Meq. D.; Curt.; Stæg.; Zett.—*vittata,* Meq. D. N. Testacea, antennis tarsisque fuscis, illis basi testaceis, alis subcinereis, basi fusco variis, fascia media apicibusque cinereis, abdominis fasciis apiceque nigris. Long. 2–3; alar. 4–6 lin.

Testaceous. Antennæ brown, testaceous towards the base. Wings slightly greyish, clouded with brown here and there towards the base, and beyond the middle with a grey band which extends to the hind border, and is brown towards the costa; tips grey. Abdomen with a black band on the hind border of each segment; tip black. Tarsi brown.

Not rare. (E.)

6. **phalerata,** Hoffm.; Meig. Zw. i. 223. 3 (1818); Curt.; Gim.; Stæg.; Zett.—*longicornis,* F.—*maculata?* Hoffm.; Meig.; Zett. Testacea, antennis fuscis basi testaceis, alis sublimpidis, basi disco costa apicibusque maculatis, tarsis fuscescentibus. Long. 2–2½; alar. 4–5 lin.

Testaceous. Antennæ brown, testaceous towards the base. Wings nearly limpid, clouded with pale brown at the base, in the middle with a brownish band, which does not extend to the hind border, with a brownish costal spot beyond the middle, and with grey tips. Tarsi brownish.

Not rare. (E. I.)

7. **fasciata,** Meig. Zw. i. 223. 2 (1818); Curt.; Mcq.; Gim.; Zett. —*multicincta*, Curt.—*nana*, Mcq.—*pusilla*, Meig. Testacea, vertice nigro, antennis nigricantibus, thorace fusco-trivittato, abdominis vitta dorsali fasciisque tarsisque fuscis. Long. $2\frac{1}{2}$–4; alar. 4–7 lin.

Testaceous. Head black above. Antennæ blackish, testaceous at the base. Thorax with three brown stripes, the lateral pair short. Wings very slightly greyish. Abdomen with an interrupted brown dorsal stripe, and a brown band on the fore border of each segment. —Var. Antennæ with testaceous bands.

Not rare. (E. I.)

Genus XXIII. **BOLITOPHILA.**

BOLITOPHILA, Hoffm.; Meig. Zw. i. 220 (1818); Meq.; Zett. *Macrocera* p., Meig. Kl. *Messala*, Curt.

Corpus gracillimum. Caput parvum. Oculi ovati. Ocelli tres, medius vix antepositus. Palpi 4-articulati, cylindrici; articulus primus brevissimus. *Antennæ setaceæ, gracillimæ*, 16-articulatæ, *corpore breviores.* Thorax ovatus. *Alæ angustæ; vena cubitalis furcata.* Halteres sat longi. *Abdomen attenuatum. Pedes longi, gracillimi; tibiæ spinis et calcaribus nullis. Mas.* Antennæ pubescentes, longiores. Abdomen lineare, subcylindricum. *Fœm.* Antennæ nudæ, breviores. Abdomen longi-fusiforme.

Body very slender. Head small. Eyes oval. Ocelli three, the middle one hardly in front of the others. Labrum elongate-trigonate. Labium rather short and broad. Palpi cylindrical, four-jointed; first, second, and third joints short; fourth longer, slender. *Antennæ* sixteen-jointed, *setaceous, very slender, shorter than the body*, sixteenth joint longer than the fifteenth, with the apex somewhat attenuated for a short space, but not divided by any further articulation. Thorax oval. *Wings narrow;* subcostal vein curved forward at its tip, ending at about half the length of the wing; radial curved upward at its tip, ending at full three-fourths of the length; *cubital forked*, springing from the radial at hardly before half the length, curved by its base, almost straight from thence to the tip along its hind fork, and nearly at a right angle with its fore fork, which joins the radial near its tip; subapical emitting before half its length a transverse veinlet, which joins the cubital and bounds the præbrachial areolet, forked a little beyond this; præbrachial, pobrachial and anal veins distinct; humeral veinlet near the base; areolets fourteen,—the humeral, the radical, the subcostal, the radial, the præbrachial, the pobrachial, which is extremely short, two cubital, the subapical, three externo-medial, the anal, and the axillary; posterior margin forming an inward curve at a little within the length of the humeral areolet from the base. Halteres moderately long. *Abdomen long, attenuated. Legs long, very slender; tibiæ without spines or spurs. Male.* Antennæ pubescent, longer than those of the female.

Abdomen linear, nearly cylindrical. *Fem.* Antennæ nearly bare. Abdomen elongate-fusiform, with nine segments; eighth small; ninth very small, almost retracted. Tentacles exserted; their second joint smaller, ovate-orbiculate.

The *Bolitophilæ* in structure recede much from the typical *Mycetophilidæ*, and are allied to *Dixa* and *Trichocera*. The two British species frequent shady places during the greater part of the year, and appear even in the middle of winter when the weather is mild.

1. **fusca,** Meig. Zw. i. 221. 2 (1818); Mcq.; Zett.—*hybrida*, Meig. Kl.—*Saundersii*, Curt.—*maculipennis*, Walk.—*bimaculata?* Zett.; Stæg. Ferruginea, vertice thoraceque nigro-cinereo, antennis nigris basi ferrugineis, thorace ferrugineo bivittato, *alis* subcinereis *macula discali cinerea et costali fusca*, halteribus apice tibiis tarsisque fuscis. Long. 4; alar. 7 lin.

Ferruginous. Vertex greyish-black. Antennæ black, ferruginous at the base. Thorax with two ferruginous stripes. *Wings* very slightly greyish, *with a grey spot at the tip of the præbrachial areolet, and a larger brown spot by the costa at the tip of the radial vein.* Halteres with brown tips. Tibiæ and tarsi brown.

Rare. (E.)

2. **cinerea,** Hoffm; Meig.! Zw. i. 221. 1. pl. 8. f. 1 (1818); Mcq.; Zett.

Nigro-cinerea, palpis, halteribus, coxis femoribusque testaceis, antennis nigris basi testaceis, pectore ferrugineo, *alis* subcinereis, *macula parva costali cinerea*, halteribus apice fuscis, tibiis tarsisque nigricantibus. Long. $2\frac{1}{2}$–3; alar. 4–5 lin.

Greyish-black. Palpi testaceous. Antennæ black, testaceous at the base. Pectus ferruginous. *Wings* very slightly greyish, *with a small grey spot by the costa at the tip of the radial vein.* Halteres testaceous with brown knobs. Legs testaceous; tibiæ and tarsi blackish.

Generally distributed. (E. S. I.)

Family III. CECIDOMYZIDÆ.

Cecidomyzidæ, Hal. D. B. i. 7 (1851). *Tipulariæ Gallicolæ*, Meig. *Cecidomiites*, Newm. *Cecidomydes*, Mcq. *Cecidomynæ*, Rond. *Cecidomyzides*, Zett. *Lestreminæ* (olim) aut *Sciarinæ* p., Rond.

Ocelli sæpissime nulli. Mesothoracis scutum integrum. Alarum venæ usque ad apices sex aut pauciores; vena costalis alæ apicem plerumque attingens.

Body small or very minute. *Ocelli very generally wanting. Antennæ generally more or less verticillate, pilose, often moniliform, or with petiolated joints. Scutum of the mesonotum undivided. Wings* generally

beautifully iridescent; *veins in their last subdivisions not more than six; costal vein extending nearly to the tip of the wing, or to the hind border; subapical vein almost always obsolete.*

These flies are the most elegant and delicate little creatures in the whole of the *Diptera*. The species are exceedingly numerous, and generally of very minute size. Descriptions of the characters and habits of all the British species would alone fill this volume, but only a few of these have as yet been observed, and it is difficult to identify them with most of the published descriptions, and I am not able to refer to collections for specimens of them. The larvæ are generally fleshy, oval grubs, rather attenuated in front, and without any exserted appendages; those of many species feed on various parts of living plants, and are thus more or less injurious to vegetation; some of them form galls, others feed on decayed wood. The pupa resembles the imago, but its form is much more contracted, with the wings and legs very short, and resting upon the breast, in distinct cases. Winnertz has published the most complete treatise on this family, and has reviewed the works of nearly all the previous authors thereon.

The genera may be grouped thus:—

Cubital vein	Distinct	1. CECIDOMYIA.
	Obsolete	2. LASIOPTERA.

The only recorded genera in addition to these are *Spaniocera* and *Heteropeza* of Winnertz, and *Brachineura* and *Ozirhynchus* of Rondani, which have not been discovered in Britain.

Genus I. **CECIDOMYIA.**

CECIDOMYIA, Latr. Gen. Cr. iv. 253 (1803); Meig.; Meq.; Loew; Winn.; Zett. *Tipula* p., L.; F. (Sp. I. et E. S.); Gmel.; D. G.; Schr. *Chironomus* p., F. (S. A.). *Macrocera* p., Meig. Kl. *Cecidomyia* et *Lasioptera* p., F. (S. A.) *Cecidomyza*, Zett. *Oligotrophus*, Latr.

Caput parvum. Oculi lunati, apud verticem contigui. *Ocelli nulli.* Proboscis brevis, crassa. Palpi 4-articulati; articulus primus brevis; secundus et tertius plerumque æquales; quartus sæpissime longior. Antennæ longæ, 13–36-articulatæ, moniliformes aut filiformes, plerumque verticillato-pilosæ. Thorax rotundatus, nonnunquam gibbosus aut antice productus. Alæ amplæ, sæpissime ciliatæ; vena costalis alæ apicem plerumque attingens; subcostalis apud costæ dimidium terminata; *cubitalis costali ad apicem connexa;* subapicalis sæpissime nulla; subanalis simplex, nonnunquam obsoleta; analis furcata, raro apicem versus obsoleta. Halteres magni. Abdomen segmentis 8, plerumque linearc. Pedes sæpissime longi, graciles; tibiæ non spinosæ nec calcaratæ; metatarsus brevissimus. *Mas.* Antennæ

sæpissime longiores, articulis longi-petiolatis, pilis verticillatis longis. Abdomen cylindricum, apice forcipatum. *Fœm.* Antennæ sæpissime breviores, articulorum petiolis brevissimis aut nullis, pilis verticillatis brevioribus. Abdomen acuminatum. Oviductus sæpissime elongatus, nonnunquam lamellis duabus apicalibus.

Size small or very minute. Head small. Eyes lunate, contiguous on the vertex. Ocelli none. Proboscis short, thick, fleshy. Palpi prominent, curved, four-jointed; first joint smaller than the others; second and third generally of equal length; fourth most often the longest. Antennæ long, often curved upwards, moniliform or filiform, generally with whorls of hairs; joints from thirteen to thirty-six in number, most often petiolated, simple, or apparently double, in some species alternately long and short. Thorax rounded, occasionally hump-shaped, in a few species prolonged like a hood over the head. Wings ample, broad and rounded at the tips, cuneiform at the base, often pubescent or ciliated; costal vein ending at the tip of the wing or near it on the fore border, or on the hind border; subcostal about half the length of the wing, or rather longer or shorter, joining the costal at its tip; cubital generally slightly curved, ending at the tip of the costal, connected with the subcostal by a transverse veinlet, near which it occasionally forms an angle, and in some species undulates from thence to the base; subapical vein almost always wanting; subanal generally distinct, often slight, occasionally obsolete; anal forked, its first or fore branch generally slight, more or less contiguous to the subanal vein, obsolete in some species; second or hind branch generally curved abruptly to the hind border, very rarely obsolete. Halteres long, with large knobs. Abdomen with eight segments in the male, cylindrical and forcipated; in the female acuminated and with an oviduct which varies much in length and shape, and has generally two valves at its tip, when it is short. Legs long, generally very slender; tibiæ without spines and spurs; first joint of the tarsi very much shorter than the second.

There are many British species which are different from those here noticed, but with some exceptions I have excluded them, and many of the following descriptions are translated and abridged from the monographs of Winnertz, who has observed the economy of most species, and whose specific characters are much more complete than those of any other author on *Cecidomyia*. Most of the species in the larva state feed on living vegetables, but several inhabit decayed wood, one or two live in oak-apples, and one, according to Rondani's observations, feeds on Aphides.

The species here described may be grouped thus:—

a. Anal vein forked.

b. Transverse veinlet between the base and the tip of the subcostal vein.

c. Cubital vein emerging from a flat radicle.

d. Thorax not gibbous.
e. Cubital vein joining the costal in front of the tip of the wing.—Subgen. *Dasineura*, Rondani, Ann. Sci. Nat. Bologna, 1847.—*Cecidomyia*, Loew, Winn.
f. Joints of the antennæ petiolated in the male, sessile in the female.
g. Body black, or brown.
h. Head black, or brown.
i. Legs with silvery reflections.
j. Wings grey. Species 1, 2.
j j. Wings white. Species 3.
j j j. Wings limpid. Species 4.
i i. Legs not silvery.
j. Face yellowish-white. Species 5.
j j. Face tawny. Species 6–8.
j j j. Face ferruginous. Species 9.
j j j j. Face brownish-tawny, brown, or black.
k. Body with tufts of silvery hairs. Species 10–13.
k k. Body without silvery hairs.
l. Wings slightly brown. Species 14, 15.
l l. Wings grey. Species 16.
l l l. Wings slightly grey. Species 17, 18.
l l l l. Wings limpid. Species 19–23.
h. Head yellow. Species 24.
g g. Body pale.
h. Disc of the thorax brown. Species 25–28.
h h. Thorax with three brown stripes. Species 29, 30.
h h h. Thorax wholly pale. Species 31–34.
f f. Joints of the antennæ petiolated in both sexes, in the female often only partly petiolated. Species 35–39.
f f f. Joints of the antennæ sessile in both sexes. Species 40–43.
e e. Cubital vein joining the costal at the tip of the wing or behind it.—Subgen. *Diplosis*, Loew; Winn.—*Phytophaga* et *Cecidomyia*, Rondani.
f. Antennæ more or less moniliform; joints generally petiolated and verticillate-pilose.
g. Cubital vein joining the costal at the tip of the wing.
h. Joints of the flagellum alternately single and double.
i. Wings unspotted.
j. Body black, or brown.
k. Scutellum tawny. Species 44, 45.
k k. Scutellum not tawny. Species 46, 47.
j j. Body yellowish-brown. Species 48.
j j j. Body yellow, or testaceous.
k. Wings slightly greyish. Species 49, 50.

k k. Wings limpid. Species 51–55.
i i. Wings coloured. Species 56–63.
h h. Joints of the antennæ of the male wholly single, and with only one whorl of hairs.
i. Wings limpid, or nearly so. Species 64–71.
i i. Wings greyish, or grey. Species 72–82.
g g. Cubital vein joining the costal behind the tip of the wing.
h. Whorls of hairs on the joints of the antennæ of the male equally long above and below.
i. Wings unspotted.
j. Body white. Species 83.
j j. Body yellow, or testaceous.
k. Thorax without stripes, or a dark disc.
l. Wings limpid. Species 84–87.
l l. Wings nearly limpid. Species 88.
l l l. Wings greyish. Species 89–92.
k k. Thorax with stripes, or a dark disc.
l. Wings limpid. Species 93–96.
l l. Wings nearly limpid. Species 97–99.
l l l. Wings greyish. Species 100–103.
l l l l. Wings slightly brown. Species 104.
j j j. Body brownish-testaceous. Sp. 105, 106.
j j j j. Body tawny. Species 107–110.
j j j j j. Body brown, or black.
k. Wings milk-white. Species 111.
k k. Wings slightly fawn-colour. Species 112.
k k k. Wings limpid. Species 113.
k k k k. Wings greyish. Species 114–117.
k k k k k. Wings grey. Species 118–121.
i i. Wings spotted. Species 122, 123.
h h. Antennæ of the male with long hairs on the upper side. Species 124–126.
f f. Antennæ filiform; joints cylindrical, sessile, not verticillate-pilose. Cubital vein joining the costal behind the tip of the wing.—Subgen. *Asphondylia*, Loew; Winn. Species 127–132.
d d. Thorax gibbous. Cubital vein joining the costal at the tip of the wing, or behind it.—Subgen. *Hormomyia*, Loew; Winn.
e. Thorax prolonged over the head. Species 133–137.
e e. Thorax not prolonged. Species 138–145.
c c. Cubital vein emerging from a forked radicle, joining the costal behind the tip of the wing.—Subgen. *Colpodia*, Loew; Winn. Species 146.
b b. Transverse veinlet very oblique, emerging from the base of the subcostal vein.

c. Joints of the antennæ not or hardly petiolated. Cubital vein emerging from a flat radicle.—Subgen. *Dirhiza*, Loew.

c c. Joints of the antennæ petiolated in both sexes, their number indeterminate. Cubital vein emerging from a forked radicle, joining the costal behind the tip of the wing.—Subgen. *Epidosis*, Loew; Winn.

d. Body yellow, or tawny.

e. Wings limpid, or nearly so. Species 147–149.

e e. Wings greyish. Species 150, 151.

e e e. Wings brownish. Species 152–157.

d d. Body black. Species 158, 159.

a a. Anal vein not forked. Cubital vein joining the costal behind the tip of the wing.—Subgen. *Asynapta*, Loew; Winn.

b. Cubital vein emerging from a forked radicle. Transverse veinlet very oblique, emerging from the base of the subcostal vein. Species 160.

b b. Cubital vein emerging from a flat radicle. Transverse veinlet between the base and the tip of the subcostal vein. Species 161, 162.

1. **rosaria,** Loew, Pr. Pos. Gymn. 35. 23 (1850); Winn.; Hardy, Scot. Gard. iii. 45 (1854). Nigro-fusca, subtus argenteo hirta, palpis flavo-fuscis, antennis 20–24-articulatis, thoracis lateribus apud alas carneis, alis cinereis hirsutie nigro-cinerea, *halteribus fulvis apice fuscis*, abdominis incisuris ferrugineis, pedibus supra nigro-fuscis subtus argenteis. Long. $1\frac{1}{2}$–2 lin.

Thorax with two stripes of thick-set hairs, which appear yellowish in some aspects, whitish in others. Costal, subcostal, and cubital veins black, stout; cubital ending at hardly in front of the tip of the wing, more thickened in the middle than that of the other species of this subgenus; second branch of the anal vein curved obliquely and not abruptly to the hind border. *Male. Antennæ* twenty- to twenty-four-jointed, *as long as the body;* joints towards the base longer than their petioles; middle and apical joints as long as their petioles. *Fem.* Antennæ twenty-two to twenty-four-jointed, half the length of the body. Oviduct of moderate length.

Forms rosette-like galls on *Salix alba, caprea, aurita, cinerea,* and *depressa.* Noticed by Frisch (Beschr. xii. 7), and by De Geer (Ins. vi. 155. 27). (E. S.)

2. **Salicis,** Schr. Fn. Boic. iii. 69. 2310 (1798); Loew; Winn.; Hardy, Scot. Gard. iii. 13 (1854). — *salicina*, Bouché. Nigra, antennis nigro-fuscis 20–24-articulatis, thoracis lateribus apud alas carneis, alis nigro-cinereis, *halteribus obscure fuscis*, femoribus tibiisque subtus argenteis; *Fœm.* abdominis incisuris ventreque carneis. Long. $1\frac{1}{3}$–$1\frac{1}{2}$ lin.

Thorax with two stripes of yellowish-white glistening hairs. Body, wings, and legs very pubescent; hairs of the body and of the legs

mostly silvery. *Male. Antennæ* twenty- to twenty-two-jointed, *three-fourths of the length of the body;* joints towards the base twice the length of their petioles, but only half as long again towards the middle. *Transverse veinlet at the end of the basal half of the subcostal vein not as in* C. rosaria *at the end of the basal third of that vein. Fem.* Antennæ twenty-two to twenty-four-jointed, half the length of the body.

Not rare. (E. S. I.) Forms woody galls on the twigs of *Salix aurita* and of *S. cinerea,* and more rarely on those of *S. caprea.* Noticed by De Geer (Ins. vi. 155. 27).

3. **albipennis,** Loew, Pr. Pos. Gymn. 35. 24 (1850); Winn. Nigro-fusca, capite nigro, antennis flavido-albis 15-articulatis, thorace cinereo vittis quatuor nigris obscuris, lateribus abdominisque incisuris ferrugineis, alis maris præsertim albis, halteribus albis apice fuscis, pedibus subtus tibiis posticis tarsisque posterioribus supra quoque argenteis. Long. 1 lin.

Body clothed with black hairs. Wings with white hairs and white veins; costal vein brownish; cubital vein almost straight, ending at some little distance from the tip of the wing; second branch of the anal curved to the hind border. *Male.* Antennæ rather more than half the length of the body; joints almost twice the length of their petioles. Transverse veinlet before the middle of the subcostal vein. *Fem.* Antennæ rather less than half the length of the body. Transverse veinlet at the middle of the subcostal vein. Oviduct elongated, without valves.

Inhabits rose-formed galls on *Salix alba.*

4. **Papaveris,** Winn. Linn. Ent. viii. 229. 16 (1853). Nigro-fusca, antennis fuscis 16–17-articulatis, thorace vittis duabus e pilis flavo-argenteis, lateribus nonnunquam carneis, alis limpidis, costa pilisque nigris, halteribus abdomineque fulvis, hoc fasciis nigris, pedibus fuscis subtus argenteis. Long. $\frac{2}{3}$–$\frac{5}{6}$ lin.

Transverse veinlet very distinct; cubital vein bent forward at its junction with the veinlet, beyond which it is convex in front and joins the costal at some distance in front of the tip of the wing; second branch of the anal vein curved to the hind border. *Male.* Antennæ seventeen-jointed, nearly as long as the body; petioles half the length of the joints towards the base, and three-fourths of the length in the middle and towards the tips; terminal joint not petiolated. *Fem.* Antennæ sixteen-jointed, rather more than half the length of the body. Oviduct elongated, without valves.

Lives in the seed-capsules of *Papaver Rhœas* and of *P. dubium.*

5. **albilabris,** Winn. Linn. Ent. viii. 217. 4 (1853). *Mas,* nigra, facie proboscide palpisque flavo-albis, antennis nigro-fuscis 19-articulatis, thoracis lateribus abdominisque incisuris fulvis, alis subcinereis, halteribus albidis, pedibus nigro-fuscis, femoribus tibiisque subtus aut omnino albo-flavis. Long. 1 lin.

Wings with blackish-grey down; veins brown; costa stout, black;

transverse veinlet very pale at the middle of the subcostal vein; cubital vein curved, ending near the tip of the wing; first branch of the anal curved to the hind border. *Male.* Antennæ as long as the body; joints as long as their petioles. *Fem.* Antennæ half the length of the body; oviduct very long; third segment and hind half of the second yellow.

Lives in decayed beech-wood.

6. **riparia,** Winn. Linn. Ent. viii. 218. 5 (1853). *Fusca,* facie fulva, palpis albidis, antennis 15–16-articulatis, thoracis lateribus carneis, alis limpidis, halteribus flavo-fuscis, abdomine fulvo, pedibus nigris subtus albidis. Long. $\frac{2}{3}$–$\frac{3}{4}$ lin.

Brown. Wings whitish in some aspects, with blackish-grey down; veins brown; transverse veinlet very slight and indistinct, situate beyond the middle of the subcostal vein; cubital vein ending at some little distance from the tip of the wing; second branch of the anal curved abruptly and slightly obliquely to the hind border. *Male.* Antennæ fifteen to sixteen-jointed; joints towards the base as long as their petioles, rather shorter towards their tips; cubital vein hardly curved. *Fem.* Antennæ fifteen-jointed; cubital vein distinctly curved. Oviduct elongated, without valves; second and third joints yellow.

Inhabits the male blossoms of *Carex riparia.*

7. **Persicariæ,** L. S. N. ii. 977. 49 (1767); F.; Gmel.; Schr.; Loew; Winn. *Fœm. nigra,* facie fronteque fulvis, palpis albido-flavis, antennis 16-articulatis fuscis basi flavis, thorace nigro-cinereo vittis quatuor nigris, alis vix subcinereis venis nigris, abdomine carneo fasciis nigris, femoribus subtus albo-micantibus. Long. 1 lin.

Fem. Black. Front and face tawny. Palpi whitish-yellow. Antennæ sixteen-jointed, brown, yellow at the base, half the length of the body. Thorax blackish-grey, with deep black stripes in the middle and one on each side. Wings almost limpid, with black down and veins; costa and hind border stout and black, the latter with a very broad fringe; transverse veinlet distinct, situate at about the middle of the subcostal vein; cubital straight, ending at some little distance from the tip of the wing; second branch of the anal curved to the hind border. Halteres whitish-yellow at the base. Abdomen flesh-colour, with black hairy bands. Oviduct elongated, without valves, yellow towards the tip.

Infests the leaves of *Polygonum amphibium.*

8. **marginem-torquens,** Bremi, Denkschriften der Schweizerischen Gesellschaft für Naturwissenchaften, pl. 2. f. 32, 33 (1847); Winn. Hardy, Scot. Gard. iii. 78 (1854). *Nigra,* albo-hirta, facie *thoracis lateribus scutello et metathorace fulvis,* palpis albidis, antennis pallide fuscis 15–16-articulatis, alis subcinereis venis fuscis costa valida nigra, abdomine sordide flavo (in mortuis obscuriore), pedibus nigro-fuscis subtus albis. Long. $\frac{1}{2}$–$\frac{3}{4}$ lin.

Black. Sides of the thorax, scutellum, and metathorax tawny. Wings with blackish-grey down; transverse veinlet very pale, situate in the

middle of the subcostal vein; cubital somewhat curved in the middle, straight from thence to the tip, joining the costal at some distance in front of the tip of the wing; second branch of the anal vein curved to the hind border. *Male.* Antennæ fifteen- to sixteen-jointed, nearly as long as the body; joints towards the base twice the length of their petioles, but only longer by one-third towards their tips. *Fem.* Antennæ fifteen-jointed, half the length of the body. Abdomen with broad black hairy bands, oviduct elongated, without valves; first segment blackish, broad and thick; second and third yellowish.

Lives in the deformed leaf-borders of *Salix viminalis.* (E. S.)

9. **Sisymbrii,** Schr. Fn. Boic. iii. 83. 2352 (1798); Loew; Winn. —*Barbareæ*, Curt. Nigra, facie ferruginosa, proboscide palpisque albidis, antennis nigro-fuscis, 16–17-articulatis, thoracis lateribus halteribus abdomineque fulvis aut fuscis, alis subcinereis costa nigra, femoribus basi subtusque flavis, tibiis tarsisque albo-nitentibus. Long. $\frac{2}{3}$–$\frac{3}{4}$ lin.

Wings with black pubescence, and with blackish-brown veins; transverse veinlet pale, very oblique, joining the middle of the subcostal vein; cubital vein bent forward at its junction with the transverse veinlet, thence curved towards the fore border, which it joins far from the tip of the wing; second branch of the anal vein curved obliquely, and not abruptly to the hind border. *Male.* Antennæ sixteen- to seventeen-jointed, rather longer than the body; joints as long as their petioles in the middle, rather longer towards the base, and rather shorter towards the tips of the antennæ. *Fem.* Antennæ sixteen-jointed, rather more than half the length of the body; oviduct elongated, very slender, without valves; second and third segments yellowish.

Lives in May and June in the flowers of *Barbarea vulgaris*, and from June to November in the folded, blister-like galls of *Nasturtium sylvestre.*

10. **salicina,** Schr. Fn. Austr. 425. 884 (1781); Loew; Winn.; Hardy, Scot. Gard. iii. 48 (1854).—*Frischii*, Bremi. Nigro-fusca, fasciculis argenteis, facie proboscide et palpis fusco-fulvis aut fuscis, *antennis* 16–17-*articulatis*, thoracis lateribus fulvo-vittatis, alis cinerascentibus pilis obscurioribus, halteribus albidis apice nonnunquam fuscis, abdomine carneo, fasciis dorsalibus nigris, pedibus subtus argenteis. Long. $\frac{3}{4}$–1 lin.

Costa of the wings squamose, stout, deep black; veins dark brown; transverse veinlet pale, situate about the middle of the subcostal vein; *cubital very slightly curved*, ending at some little distance from the tip of the wing; second branch of the anal forming an obtuse angle, slightly curved to the hind border. *Male. Antennæ sixteen to seventeen-jointed*, nearly as long as the body; joints as long as their petiole, rather longer towards the base. *Fem. Antennæ sixteen-jointed*, half the length of the body. Abdomen tawny beneath. Oviduct elongated, without valves; two last segments whitish-yellow.

Lives in the withered tips of the young shoots of *Salix Caprea* and *S. alba*. Noticed by Frisch (Beschr. i. 4. 38. xxi.).

11. **iteophila,** Loew, Pr. Pos. Gym. 35. 26 (1850); Winn. Nigro-fusca, *antennis* 14–15-*articulatis*, alis cinerascentibus, pedibus fuscis subtus pallidioribus. Long. $\frac{2}{3}$–$\frac{3}{4}$ lin.

Costa of the wings squamose, stout, deep black; veins dark brown; transverse veinlet pale, situate about the middle of the subcostal vein; *cubital vein quite straight*, ending at some little distance in front of the tip of the wing; second branch of the anal forming an obtuse angle, slightly curved to the hind border. *Male. Antennæ* 14–15-*jointed*, nearly as long as the body; joints as long as their petioles, rather longer towards the base. *Fem. Antennæ fourteen-jointed*, half the length of the body. Abdomen tawny beneath. Oviduct elongated, without valves; two last segments whitish-yellow.

Very nearly allied to *C. salicina;* joints of the antennæ one or two less in number. Lives in the rose-like galls of *Salix alba*.

12. **heterobia,** Loew, Pr. Pos. Gym. 35. 25 (1850); Winn. Nigro-fusca, alis cinerascentibus, pedibus fuscis subtus pallidioribus; *Mas, antennis* 17–19-*articulatis; Fœm. antennis* 16-*articulatis*. Long. $\frac{3}{4}$ lin.

Costa of the wings squamose, stout, deep black; veins dark brown; transverse veinlet pale, situate about the middle of the subcostal vein; cubital vein generally quite straight, in some cases slightly curved upward near the tip, ending at some little distance in front of the tip of the wing; second branch of the anal forming an obtuse angle, slightly curved to the hind border. *Male. Antennæ seventeen- to nineteen-jointed*, nearly as long as the body; joints as long as their petioles, rather longer towards the base. *Fem. Antennæ sixteen-jointed*, half the length of the body. Abdomen tawny beneath. Oviduct elongated, without valves; two last segments whitish-yellow.

Lives in the male flowers and in the rosettes on the tips of the twigs of *Salix amygdalina*, and changes there to the pupa state.

13. **terminalis,** Loew, Pr. Pos. Gym. 35. 28 (1850); Winn. Nigro-fusca, antennis basi fuscis aut flavis, alis cinerascentibus, pedibus fuscis subtus pallidioribus; *Mas, antennis* 19-*articulatis; Fœm. antennis* 16-*articulatis*. Long. $\frac{2}{3}$–1 lin.

Antennæ often brown or yellow at the base. Costa of the wings squamose, stout, deep black; veins dark brown; transverse veinlet pale, situate about the middle of the subcostal vein; cubital vein generally distinctly curved towards the tip, ending at some little distance in front of the tip of the wing; second branch of the anal forming an obtuse angle, slightly curved to the hind border. *Male. Antennæ nineteen-jointed*, nearly as long as the body; joints as long as their petioles, rather longer towards the base. *Fem. Antennæ sixteen-jointed*, half the length of the body. Abdomen tawny beneath. Oviduct elongated, without valves; two last segments whitish-yellow.

Lives in the tips of the shoots of *Salix fragilis,* which it rolls together. This and the two preceding species seem hardly to differ from *C. Salicina.*

14. **Euphorbiæ,** Bouché; Loew, Pr. Pos. Gym. 36. 34 (1850); Winn.—*subpatula?* Bremi. Nigra, antennis nigro-fuscis 16-articulatis, thoracis lateribus apud alas abdominisque incisuris carneis, alis subfuscis, venis nigris, *pedibus nigris subtus albis; Fœm.* abdomine carneo fasciis nigris. Long. $\frac{1}{2}$–$\frac{2}{3}$ lin.

Black. Wings whitish in some aspects, with blackish-grey down; costa stout; transverse veinlet very pale, situate at the middle of the subcostal vein; cubital straight or very slightly curved, ending at some little distance in front of the tip of the wing; second branch of the anal curved to the hind border. *Legs black, white beneath. Male.* Antennæ shorter than the body; joints longer by half than their petioles. Abdomen blackish-brown, with flesh-coloured sutures. *Fem.* Antennæ half the length of the body. Abdomen flesh-coloured, with broad black hairy bands. Oviduct elongated, without valves; third segment yellow.

Lives in the tips of the leaves of *Euphorbia Cyparissias.*

15. **innotata,** n. Nigra, alis subfuscis, venis obscurioribus, *pedibus sordide testaceis validiusculis, tarsis fuscis.* Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Black. Wings slightly brownish; veins darker. *Legs dingy testaceous, rather stout, tarsi brown.*

Not common. (E.)

16. **Klugii,** Meig. Zw. i. 95. 3 (1818); Loew. *Fœm. nigra,* antennis 18-articulatis, articulis ovatis breviter pilosis, *thorace cinereo vittis tribus nigris,* alis cinereis, halteribus pedibusque fuscis. Long. $1\frac{1}{2}$ lin.

Fem. Black. Antennæ eighteen-jointed; joints oval, with short hairs. *Thorax cinereous, with three deep black stripes.* Wings grey; with darker hairs. Halteres and legs brown.

Rare. (E.)

17. **acrophila,** Winn. Linn. Ent. viii. 233. 19 (1853). *Nigra,* antennis 19–20-articulatis, thoracis lateribus halteribusque carneis aut fuscis, alis subcinereis, costa venisque nigris, *abdominis incisuris ventreque carneis,* pedibus subtus albo-micantibus. Long. 1 lin.

Black. Wings whitish in some aspects; transverse veinlet situate at far before the middle of the subcostal vein; cubital vein bent forward at its junction with the veinlet, curved hindward from thence to its tip, which joins the costal at some distance from the tip of the wing; second branch of the anal vein proceeding abruptly to the hind border, and forming a very slightly obtuse angle; *sutures and under side of the abdomen flesh-colour. Male.* Antennæ nearly as long as the body; joints and their petioles of equal length; whorls of hairs hoary. *Fem.* Antennæ half the length of the body. Oviduct yellowish, elongated, without valves; first segment flesh-colour.

Lives in the top leaves of *Fraxinus excelsior,* forms hollow pod-shaped cells, and undergoes its transformation in the earth.

18. **costalis,** n. *Mas, fusca,* capite nigro, antennis nigris 20-articulatis, *thorace vittis tribus cinereis, scutello pectore abdomineque testaceis,* alis subcinereis, costa venisque nigris, pedibus testaceis, tibiis apice tarsisque fuscis. Long. $1\frac{1}{2}$; alar. 3 lin.

Male. Head black. Antennæ black, twenty-jointed, moniliform; joints successively decreasing in size, their petioles a little longer than the incrassated part. *Thorax brown, with three grey stripes; scutellum, pectus, and abdomen testaceous.* Wings greyish, with blackish borders; costal vein and cubital vein black, the former ending much before the middle of the wing, the latter near the tip. Halteres testaceous. Legs testaceous, long, slender; tibiæ towards the tips and tarsi brown.

Not common. (E.)

19. **Cardaminis,** Winn. Linn. Ent. viii. 225. 13 (1853). *Nigra,* antennis fuscis 16–17-articulatis, thorace cinereo nigro-trivittato, scutello nonnunquam carneo, alis limpidis violaceo-cyaneo iridescentibus, *halteribus abdomineque fulvis,* hoc incisuris fuscis, pedibus nigro-fuscis subtus albidis basi argenteo-hirtis. Long. $\frac{1}{2}$–$\frac{3}{4}$ lin.

Black. Antennæ sixteen- to seventeen-jointed. Wings with blackish-grey down; veins brown; costa stout, deep black; subcostal vein very near the costa; transverse veinlet pale but distinct, joining by the middle of the subcostal vein; cubital slightly bent forward at its junction with the veinlet, then somewhat convex on the hind side, straight along its apical third part, joining the costal at some distance from the tip of the wing; second branch of the anal covered to the hind border. *Male.* Antennæ as long as the body; petioles of the joints towards the base short, those in the middle one-fourth shorter than the joints. *Fem.* Antennæ as long as the head and the thorax together; cubital vein straight from the transverse veinlet to the border. Abdomen flesh-colour, with deep black bands on the hind borders of the segments. Oviduct whitish-yellow, elongated, without valves.

Lives in the flowers of *Cardamine pratensis;* changes to the pupa state in the earth.

20. **Cratægi,** Winn. Linn. Ent. viii. 228. 15 (1853). *Nigra,* palpis fusco-flavis, *antennis* 15–16-*articulatis, thoracis lateribus metathoraceque carneis,* alis limpidis nigro-hirtis, costa nigra, *halteribus albis,* abdomine carneo fasciis nigris, pedibus nigro-fuscis subtus albis. Long. $\frac{3}{4}$ lin.; alar. 2 lin.

Subcostal and cubital veins blackish-brown; transverse veinlet pale, situate at the middle of the subcostal vein; cubital vein bent forward at its junction with the veinlet, afterwards straight or almost curved forward, joining the costal at some distance in front of the tip of the wing; second branch of the anal curved to the hind border. *Male. Antennæ sixteen-jointed,* rather shorter than the body; joints and their

petioles of almost equal length; last joint generally not petiolated. *Fem. Antennæ fifteen-jointed*, half the length of the body; joints not close set together, but hardly petiolated. Oviduct elongated, yellow towards the tip, without valves.

Generally distributed. (E.) Lives in the leaf-tufts of *Cratægus Oxyacanthus* and *C. coccinea*, and assumes the pupa state sometimes there, sometimes in the earth. The shoots in white-thorn hedges very often terminate in tufts or knobs, each of which is tenanted by several of the grubs of this fly.

21. **Brassicæ,** Winn. Linn. Ent. viii. 231. 18 (1853). Nigra aut nigro-fusca, palpis albidis, antennis 15-articulatis, alis limpidis, costa nigra, basi *halteribus*que *carneis*, abdomine carneo fasciis dorsalibus nigris, pedibus subtus argenteis. Long. $\frac{1}{2}$–$\frac{5}{8}$ lin.

Wings with black veins; subcostal vein very near the costa; transverse veinlet joining the middle of the subcostal vein; cubital vein convex hindward, joining the costa far from the tip of the wing; second branch of the anal vein curved to the hind border. *Halteres flesh-colour. Male.* Antennæ rather shorter than the body; joints and their petioles of equal length, with long whorls of hairs. *Fem.* Antennæ with short whorls of hairs, not quite half the length of the body; joints cylindrical, without petioles. Oviduct elongated, yellowish-white, without valves.

Lives in the pods of the rape, often from fifty to sixty in one pod, and goes into the earth previous to its metamorphose.

22. **Strobi,** Kaltenbach, MSS.; Winn. Linn. Ent. viii. 234. 20 (1853). *Fusca*, antennis 17–19-articulatis, alis limpidis cinereo-hirtis, costa nigro-fusca, *halteribus albis*, ventre argenteo, pedibus piceis subtus albo-micantibus. Long. 1–1$\frac{1}{10}$ lin.

Wings with pale brown veins; transverse veinlet slender and pale, joining the subcostal at two-thirds of its length; cubital vein a little bent forward at its junction with the veinlet, thence slightly curved hindward, and joining the costal near the tip of the wing; second branch of the anal vein curved towards the hind border. *Male. Antennæ nineteen-jointed*, as long as the body; middle and apical joints and their petioles of equal length. *Fem. Antennæ seventeen to eighteen-jointed*, half the length of the body; joints without petioles, but not close-set together. Oviduct elongated, without valves; second and third joints yellowish-white.

Lives in the fallen cones of *Pinus Abies.*

23. **serotina,** Winn. Linn. Ent. viii. 316. 97 (1853). *Nigro-fusca, capite palpis antennisque fuscis*, his 16–17-articulatis, alis limpidis pilis costaque nigris, *halteribus niveis*, abdomine fasciis pilosis nigris, pedibus subtus albo-nitentibus; *Mas*, abdomine nonnunquam fulvo; *Fœm.* abdomine carneo. Long. $\frac{2}{3}$–$\frac{3}{4}$ lin.

Subcostal vein near the costa; transverse veinlet very pale, joining

the middle of the subcostal vein; cubital vein convex behind, joining the costa at some distance from the tip of the wing; second branch of the anal vein curved towards the hind border. *Male.* Antennæ sixteen to seventeen-jointed; as long as the body; joints as long as their petioles. Abdomen occasionally tawny; hind borders of the segments with black hairs. *Fem.* Antennæ sixteen-jointed, as long as the head and the thorax together. Abdomen flesh-colour; hind borders of the segments with black hairs. Oviduct elongated, whitish, without valves.

Lives in the tips of the shoots of *Hypericum humifusum*, and changes to a pupa in the earth.

24. **circumdata,** Winn. Linn. Ent. viii. 226. 14 (1853). Fusca, capite flavo, antennis fuscis 13–14-articulatis basi flavis, thoracis lateribus scutello pectore et metathorax flavis, alis ovatis subfuscescentibus nigro-hirtis, halteribus albidis apice nigro-fuscis, abdominis incisuris basi ventreque flavis, abdomine sordide flavo incisuris albidis, pedibus nigro-fuscis subtus pallidis. Long. $\frac{1}{2}$ lin.

Veins of the wings blackish-brown; transverse veinlet very pale and small, joining the middle of the subcostal vein; cubital vein much bent forward at its junction with the veinlet, beyond which it is slightly curved forward, and ends at hardly in front of the tip of the wing; second branch of the anal vein forming an obtuse angle, and joining the hind border. *Male.* Antennæ fourteen-jointed, as long as the body; joints twice the length of their petioles. *Fem.* Antennæ thirteen-jointed, half the length of the body. Oviduct very short, with two small, rounded, whitish valves.

Lives in the leaf-tops or tufts of *Cratægus Oxyacantha*, and changes to the pupa state in the earth.

25. **Betulæ,** Kalt. MSS.; Winn. Linn. Ent. viii. 234. 21 (1853). *Obscure citrina, antennis* fuscis 12–13-*articulatis*, thoracis dorso nigro-fusco, *alis limpidis aut lacteis*, pilis venisque pallidis, halteribus albis, abdomine nonnunquam fuscescente, *pedibus pallide flavis.* Long. $\frac{9}{10}$–$1\frac{1}{10}$ lin.

Wings limpid or whitish; transverse veinlet filiform, colourless, situate at a little before the middle of the subcostal vein; cubital vein almost straight, but slightly curved hindward towards the tip, which joins the costa near the tip of the wing; second branch of the anal vein curved towards the hind border. *Male. Antennæ twelve- to thirteen-jointed,* rather more than half the length of the body; joints longer by half than their petioles; apical joint with a very short petiole. *Fem. Antennæ twelve-jointed,* one-third of the length of the body; joints sessile. Oviduct moderately long, without valves; third segment white.

Appears in March, April, or May, having lived through the winter in the preceding year's female catkins of *Betula alba.*

26. **Galeobdolontis,** Kaltenbach, MSS.; Winn. Linn. Ent. viii. 238. 25 (1853). *Fœm. pallide flava, antennis* fuscis 16-*articulatis,*

basi flavis, thoracis disco pallide fusco, *alis limpidis*, costa nigro-fusca, venis fuscis, halteribus albidis, abdominis segmentorum marginibus posticis fusco-pilosis, *pedibus pallide fuscis subtus albo-flavis*. Long. $\frac{3}{4}$ lin.

Fem. Pale yellow, or whitish. *Antennæ sixteen-jointed*, half the length of the body. *Wings limpid*, with grey pubescence; subcostal vein near the costa; transverse veinlet pale, but distinct, joining the middle of the subcostal vein; cubital almost straight from its junction with the veinlet to its tip, which joins the costa at some little distance from the tip of the wing; second branch of the anal vein curved to the hind border. Oviduct elongated, whitish-yellow, without valves.

Lives in the thickened, almost subterraneous stalks of *Galeobdolon luteum*.

27. **obfuscata,** Meig. Zw. i. 90. 5 (1818). Testacea, capite antennisque nigris, thoracis disco fusco, *alis hyalinis cinereo-pubescentibus*, costa venaque cubitali nigricantibus, tibiis tarsisque fusco fasciatis. Long. $\frac{1}{2}$–$\frac{3}{4}$; alar. $1\frac{1}{4}$–2 lin.

Testaceous. Head and antennæ black. Disc of the thorax brown. *Wings hyaline*, with grey pubescence; costa and cubital vein blackish. *Legs* with whitish reflections; *tibiæ and tarsi with brown bands*. *Male*. Joints of the antennæ petiolated. *Fem*. Joints of the antennæ sessile.

Not rare. (E.) The larva has been observed by M. Kaltenbach to feed on the thistle. Meigen includes this species with *Lasioptera*, but it seems to be nearer allied to *Cecidomyia*.

28. **Galii,** Winn. MSS.; Loew, Pr. Pos. Gymn. 37. 43 (1850); Winn. Linn. Ent. viii. 235. 22 (1853). *Flava*, capite nigro-cinereo, antice palpisque sordide flavis, antennis pallide fuscis 16–17-articulatis, thorace vittis tribus nigro-fuscis, pectore nigricante, *alis* amplis *limpidis*, costa venisque nigris, halteribus fuscis basi flavis, abdomine fulvo fasciis nigris, pedibus fuscis subtus albidis. Long. $\frac{3}{4}$ lin.

Wings limpid; transverse veinlet pale, situate at before the middle of the subcostal vein; cubital vein curved hindward, joining the costa at a moderate distance from the tip of the wing. *Male*. Antennæ seventeen-jointed, rather shorter than the body; joints and their petioles of equal length; second branch of the anal vein curved towards the hind border. *Fem*. Antennæ sixteen- to seventeen-jointed, half the length of the body; second branch of the anal vein forming an obtuse angle. Oviduct long, yellow, without valves.

Lives in the blister-like galls of the deformed flower-stalks of *Galium uliginosum* and *G. Mollugo*, and enters the earth for its transformation.

29. **pratorum,** Winn. Linn. Ent. viii. 237. 23 (1853). *Fœm. fulva*, antennis 15-articulatis, thorace fusco-trivittato, *alis flavescentibus*, venis fuscescentibus, costa nigro-fusca, halteribus albis, pedibus pallide flavescentibus (in mortuis subpiceis). Long. $\frac{3}{5}$ lin.

Fem. Tawny. Antennæ brownish-yellow, fifteen-jointed, half the

length of the body. Thorax with three brown stripes, clothed like the abdomen with gilded hairs. *Wings yellowish*, with grey pubescence; transverse veinlet very slender, joining the middle of the subcostal vein; cubital vein bent forward at its junction with the veinlet, curved hindward, joining the costa at some distance from the tip of the wing; second branch of the anal vein curved to the hind border. Halteres white. Oviduct elongated, tawny, without valves; last segment yellow. Legs pale yellowish.

Habits unknown.

30. **Veronicæ,** Bremi, Beitr. neue Denkschrift. etc. 49. 6 (1847); Loew; Winn. *Fulva*, antennis fuscis basi flavis 15–16-articulatis, thorace fusco-trivittato, pectore nigricante, *alis subfuscescentibus* margine nigro, venis nigro-fuscis, halteribus albis, abdomine fasciis nigricantibus, ventre albo-hirto, pedibus nigro-fuscis subtus albis, femoribus basi flavis. Long. $\frac{3}{4}$ lin.

Wings brownish; transverse veinlet very pale, indistinct; cubital vein bent forward at its junction with the veinlet, slightly convex hindward from thence, and joining the costa at some distance from the tip of the wing; second branch of the anal vein curved to the hind border. *Male.* Antennæ fifteen- to sixteen-jointed, as long as the body; joints as long as their petioles, and towards the base rather longer. *Fem.* Antennæ fifteen-jointed, half the length of the body. Oviduct yellow, almost as long as the body, without valves; first segment tawny, occasionally with a brown tip or wholly brown.

Lives in the barren shoots of *Veronica Chamædrys,* fastening the leaves together, and forming a thickly hairy pouch, in which it changes to the fly state.

31. **sociata,** n. *Fœm. fulva*, antennis nigris, *alis sublimpidis*, costa venaque cubitali nigris, halteribus albidis, abdomine testaceo, *pedibus testaceis, tibiis tarsisque fusco-fasciatis.* Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Fem. Tawny. Antennæ black; joints sessile. *Wings nearly limpid*, pubescent, ciliated; costa and cubital vein black. Halteres whitish. Abdomen testaceous. *Legs pale testaceous; tibiæ and tarsi with brown bands.*

Rare. In the British Museum. (E.)

32. **discolor,** n. *Mas, sordide testacea*, capite antennisque nigris, articulorum petiolis testaceis, *alis subcinereis*, venis pallide fuscis, *pedibus pallide testaceis, tarsis fuscescentibus.* Long. $\frac{3}{4}$; alar. 2 lin.

Male. Dingy testaceous. Head black. Antennæ black, moniliform; petioles of the joints testaceous, a little longer than the incrassated part. *Wings greyish;* veins pale brown. *Legs pale testaceous*, long, slender; *tarsi brownish.*

Not common. (E.)

33. **decolorata,** n. *Fœm. pallide testacea*, capite antennisque nigricantibus, *alis subcinereis*, venis fuscis, *pedibus albido-testaceis, tarsis fuscescentibus.* Long. $\frac{3}{4}$; alar. 2 lin.

Fem. Pale testaceous. Head and antennæ blackish. *Wings slightly* greyish; veins brown. *Legs whitish testaceous*, slender; *tarsi brownish.*
Not common. (E.)

34. **tecta,** n. *Fœm. testacea*, capite antennisque nigris, his corpore multo brevioribus, articulis cylindricis, *alis latis cinereis*, venis nigris, *abdomine piceo*, pedibus validis. Long. 1; alar. 2 lin.

Fem. Testaceous. Head and antennæ black. Antennæ eleven-jointed, verticillate-pilose, testaceous at the base, much shorter than the body; joints double, nearly cylindrical, about twice the length of their petioles. *Wings broad, grey*, pubescent, ciliated all round the border; veins black; subcostal vein little more than one-third of the length of the wing; cubital hardly curved; subanal very distinct; first branch of the anal slight, apparently united with the subanal; second branch curved very abruptly and hardly obliquely to the hind border. *Abdomen piceous.* Legs stout, pubescent, not long.
Rare. (E.)

35. **Ulmariæ,** Bremi, Denksschr. Schw. Ges. Naturw. 52. 9 (1847); Hardy; Loew; Winn. *Fusco-flava*, capite flavo, vertice nigricante, antennis fuscis 16-articulatis basi flavis, *thorace vittis tribus nigro-fuscis, alis subfuscescentibus*, venis pilis margineque nigricantibus, halteribus flavescentibus capitulo fusco, abdomine rufo-flavo fasciis nigro-pilosis, pedibus nigro-fuscis subtus albicantibus. Long. $\frac{1}{3}$–$\frac{2}{3}$; alar. $\frac{3}{4}$–$1\frac{1}{4}$ lin.

Brownish-yellow. Head yellow; vertex blackish. Antennæ brown, with sixteen joints, yellow at the base. *Thorax with three blackish-brown stripes. Wings slightly brown*, with the veins, hairs, and borders blackish; transverse veinlet very pale, indistinct, joining the middle of the subcostal vein; cubital vein somewhat bent forward at its junction with the veinlet, slightly convex in front nearer its tip, joining the costa far from the tip of the wing; second branch of the anal vein curved to the hind border. Halteres yellowish, with brown knobs. Abdomen tawny, with bands of black hairs. Legs blackish-brown, whitish beneath. *Male.* Antennæ as long as the body; joints as long as their petioles, rather longer towards the base. *Fem.* Antennæ half the length of the body; joints with very short but distinct petioles. Oviduct whitish-yellow, elongated, without valves; first segment tawny.
Lives in wart-like galls on the leaves of *Spiræa Ulmaria.* The fly appears in the middle of August. (E. S.)

36. **basalis,** n. *Fœm. ferruginea*, capite nigro, antennis testaceis apice fuscescentibus, *alis subfuscescentibus*, halteribus pedibusque pallide testaceis, abdomine testaceo basi nigro. Long. $\frac{1}{2}$; alar. 1 lin.

Fem. Ferruginous. Head black. Antennæ testaceous, submoniliform, brownish towards the tips; joints slightly petiolated. *Wings very slightly brownish;* veins pale. Halteres pale testaceous. Abdomen testaceous, black towards the base. Legs pale testaceous.
Not common. (E.)

37. **bursaria,** Bremi, Denkschr. Schw. Ges. Naturw. 51. 10 (1847); Winn. *Fœm. flava,* vertice thoracisque vittis nigris, antennis fuscis 18-articulatis basi flavis, *alis subcinereis* margine (costali præsertim) nigro, halteribus fuscis basi flavis, abdomine e pilis nigris fasciato, pedibus nigro-fuscis subtus flavis. Long. 1 lin.

Yellow. Antennæ brown; joints about four times the length of their petioles. Thorax with three contiguous shining black stripes. *Wings greyish,* with blackish-grey pubescence; veins dark brown; transverse veinlet very slender and pale, joining the middle of the subcostal vein; cubital vein at first straight, afterwards convex forwards, joining the costa at a moderate distance from the tip of the wing; second branch of the anal vein slightly curved between its base and the hind border. Oviduct elongated, yellow, without valves.

Lives in the pyramidal hairy galls on the upper sides of the leaves of *Glechoma hederacea.*

38. **Urticæ,** Perris, Ann. Soc. Ent. Fr. ix. 401 (1840); Loew; Winn. *Fulva,* capite flavo, antennis fuscis 16–18-articulatis basi flavis, *thorace vittis tribus nigro-fuscis, alis fere limpidis* margine (costali præsertim) nigro, halteribus fuscis basi flavis, abdomine sordide flavo e pilis nigris fasciato, pedibus nigris, femoribus basi coxisque flavis. Long. $\frac{2}{3}$–$\frac{3}{4}$ lin.

Tawny. Head yellow. Antennæ brown, yellow at the base. *Thorax with three blackish-brown stripes. Wings almost limpid;* the borders (especially the costal) black; veins brown; transverse veinlet slight, very pale, joining the middle of the subcostal vein; cubital vein bent upward at its junction with the veinlet, joining the costa far from the tip of the wing; second branch of the anal vein joining the hind border, and forming an obtuse angle. Halteres brown, yellow at the base. Abdomen dingy yellow, with borders of black hairs. Legs black; femora at the base and coxæ yellow.

Lives from June to October in the galls on the leaves and leaf-stalks of *Urtica dioica;* changes to a pupa in the earth.

39. **Pyri,** Bouché; Loew; Winn. Linn. Ent. viii. 242. 29 (1853). *Nigro-fusca,* palpis fusco-flavis, antennis fuscis 15–16-articulatis, *alis limpidis,* pilis nigro-cinereis, costa nigra, halteribus fuscis, abdomine carneo fusco-fasciato, pedibus piceis subtus albo-nitentibus. Long. $\frac{1}{2}$–1 lin.

Blackish-brown. Wings limpid; subcostal and cubital veins black; transverse veinlet large, rather pale, but distinct, joining the middle of the subcostal vein; cubital vein slightly curved in the middle, straight from thence to the tip, which joins the costa at some distance from the tip of the wing; second branch of the anal vein curved to the hind border. *Male.* Antennæ most generally sixteen-jointed, as long as the body; joints and their petioles of equal length. *Fem.* Antennæ most generally fifteen-jointed, rather more than one-third of the length of the

body; joints with very short petioles. Oviduct elongated, whitish-yellow, without valves; first segment dingy yellowish-brown.

Lives in the rolled-up borders of the leaves of young pear-trees, and has its metamorphose in the earth.

40. **Saliceti,** Winn. MSS.; Loew, Pr. Pos. Gymn. 37. 44 (1850); Winn. Linn. Ent. viii. 244. 30 (1853). *Flava*, antennis fuscis 12–15-articulatis, *thorace fusco-trivittato, alis subcinereis* margine nigro, halteribus flavo-fuscis, pedibus nigro-fuscis subtus albo-nitentibus. Long. $\frac{1}{2}$–$\frac{2}{3}$ lin.

Subcostal and cubital veins black; subcostal vein very near the costal, and apparently united with it; transverse veinlet pale, but distinct, joining the middle of the subcostal vein; cubital vein bent forward at its junction with the veinlet, convex hindward beyond, joining the costa at some distance from the tip of the wing; anal vein brown; its second branch curved to the hind border. *Male.* Antennæ twelve- to thirteen-jointed, about half the length of the body; joints almost cylindrical. *Fem.* Antennæ fourteen- to fifteen-jointed, half the length of the body; joints cylindrical. Oviduct yellow, elongated, very slender, without valves.

Lives with the larvæ of *C. terminalis* in the tips of the twigs of *Salix fragilis;* changes in the earth.

41. **pavida,** Winn. Linn. Ent. viii. 245. 31 (1853). *Fulva*, capite postico nigro-fusco, antennis nigris 14–15-articulatis basi flavis, *thorace vittis tribus nigro-fuscis, alis limpidis*, abdominis segmentorum marginibus posticis pallide fuscis, pedibus nigro-fuscis subtus albo-nitentibus. Long. $\frac{5}{6}$ lin.

Wings with black pubescence and veins; transverse veinlet pale, joining the subcostal a little before its middle; cubital vein convex hindward, straight beyond, joining the costa far from the tip of the wing; second branch of the anal vein curved to the hind border. *Male.* Antennæ fourteen-jointed, one-third of the length of the body; joints cylindrical, sessile, with short grey whorls of hairs. *Fem.* Antennæ fifteen-jointed, rather shorter than the head and the thorax together. Oviduct whitish-yellow, elongated, without valves.

Lives with *C. acrophila,* Winn., in the deformed borders of the topmost leaves of *Fraxinus excelsior;* changes to the pupa state in the earth.

42. **cinctipes,** n. *Mas, testacea*, capite nigro, antennis nigris basi testaceis, *alis limpidis*, venis fuscescentibus, *tibiis tarsisque fusco-fasciatis.* Long. $\frac{3}{4}$; alar. 2 lin.

Male. Testaceous. Head mostly black. Antennæ black, submoniliform, testaceous at the base; joints not petiolated. *Wings limpid;* veins brownish. Legs slender; *tibiæ and tarsi with pale brown bands;* subcostal vein ending at a little beyond the middle of the costa; cubital ending at about five-sixths of the length.

Not common. (E.)

43. **testacea,** n. *Mas, testacea,* capite nigro, antennis fuscis basi testaceis, *alis limpidis,* venis *tarsis*que *fuscescentibus.* Long. $\frac{3}{4}$–2 lin.

Testaceous. Head mostly black. Antennæ brown, testaceous at the base. *Wings limpid;* veins brownish. Legs slender; *tarsi brownish.*

Not common. (E.)

The following species also belong to this subgenus, and probably inhabit Britain:—

C. Artemisiæ, *Bouché; Loew.* Inhabits round knobs on the tips of the shoots of *Artemisia campestris.*

C. tubifex, *Bouché; Loew.* Lives in the flowers of *Artemisia campestris.*

C. foliorum, *Scholtz; Loew.* Lives in small galls on the leaves of *Artemisia vulgaris.*

C. Lithospermi, *Loew.* On the tops of the shoots of *Lithospermum officinale.*

C. plicatrix, *Loew.* In the curled leaves of *Rubus cæsius.*

C. Millefolii, *Loew.* In galls on *Achillea Millefolium.*

C. Bryoniæ, *Bouché.* In the tips of the shoots of *Bryonia alba.*

C. Syngenesiæ, *Loew.* In the flowers of *Chrysanthemum inodorum* and *Anthemis arvensis.* Also—

C. destructor, *Say.* The Hessian Fly, which infests the stalks of wheat.

44. **signata,** Winn. Linn. Ent. viii. 246. 32 (1853). Nigro-fusca, proboscide, palpis scutelloque fulvis, antennis fuscis, pedibus nigris subtus albis, *tarsis albis nigro-cinctis; Mas, antennis corpore paullo longioribus,* pectoris lateribus fuscis, alis limpidis, halteribus albis, abdomine ferrugineo; *Fœm. antennis corporis dimidio non longioribus,* pectoris lateribus halteribus abdomineque carneis, alis subcinereis, oviductu corpore vix breviore lamellis nullis. Long. $\frac{3}{4}$ lin.

Wings with dark grey pubescence; veins brown; transverse veinlet pale, indistinct, a little before the middle of the subcostal vein. *Male. Antennæ* twenty-six-jointed; *joints rather longer than the petioles;* second branch of the anal vein forming an almost right angle. *Fem. Joints of the antennæ twice the length of their petioles;* anal vein and its second branch forming a more obtuse angle than in the male. *Oviduct almost as long as the body,* without valves.

Lives in the dead young twigs of *Pinus sylvestris.*

45. **latibulorum,** Winn. Linn. Ent. viii. 246. 33 (1853). Nigro-fusca, facie cinerea, palpis albidis, antennis fuscis, pectoris lateribus scutello et metathorace fulvis, alis subcinereis, venis fuscis, halteribus albis, pedibus flavis, *tarsis fuscis,* tibiis nonnunquam pallide fuscis; *Mas, antennis corpore duplo longioribus,* abdomine fusco; *Fœm. antennis corpore æqualibus,* abdomine fulvo. Long. $\frac{1}{2}$ lin.

Wings with dark grey pubescence; veins brown; transverse veinlet

pale in some cases, brown in others, at a little beyond the middle of the subcostal vein; second branch of the anal vein forming a rounded angle. *Male. Antennæ* twenty-six-jointed; *joints rather shorter than their petioles. Fem. Joints of the antennæ rather longer than their petioles. Oviduct very short*, with two little somewhat rounded valves.

Habits unknown.

46. **mutabilis,** Winn. Linn. Ent. viii. 248. 34 (1853). *Fœm. fusca*, capite palpis humeris et pectoris lateribus flavis, antennis corporis longitudine, *thorace nigro-trivittato*, pectore nigricante, *alis subfuscescentibus*, venis fuscis, halteribus abdomineque fulvis, hoc basi nigricante, oviductu brevi lamellis duabus rotundatis, femoribus nigris subtus alboflavis. Long. $\frac{2}{3}$ lin.

Fem. Brown. Head, palpi, shoulders, and sides of the pectus yellow. Antennæ as long as the body, yellow at the base; joints longer by half than their petioles. Thorax with three black stripes. Pectus blackish. *Wings slightly brownish*, with blackish-grey pubescence; transverse veinlet at a little beyond the subcostal vein; anal vein and its second branch forming an obtuse angle. Halteres tawny. Abdomen tawny, with grey hairs; first, second, and third segments occasionally blackish. Oviduct short, with two rounded valves.

Habits unknown.

47. **sylvatica,** Winn. Linn. Ent. viii. 249. 35 (1853). *Fœm. nigra*, capite thoracis lateribus abdomineque fulvis, hoc fasciis nigris, palpis halteribusque pallidis, thorace e pilis flavescentibus bivittato, *alis limpidis*, venis fuscis, oviductu corporis longitudine lamellis nullis, pedibus fuscis. Long. $\frac{3}{5}$ lin.

Fem. Black. Head, sides of the thorax, and abdomen tawny. Palpi pale. Antennæ blackish-brown, half the length of the body; joints about five times the length of their petioles. Thorax with two stripes of yellowish hairs. *Wings limpid*, deeply ciliated; veins brown; transverse veinlet joining the middle of the subcostal vein; second branch of the anal vein curved to the hind border. Halteres pale. Abdomen with black bands. Oviduct as long as the body, without valves. Legs brown.

Habits unknown.

48. **Polypori,** Winn. Linn. Ent. viii. 249. 36 (1853). Flavofusca, capite proboscide palpisque flavo-albis, antennis fuscis basi albis, thoracis lateribus pectore halteribusque fulvis, alis subcinereis, abdomine rufo, femoribus fulvis, tibiis flavis, tarsis fuscis; *Mas*, antennis corpore duplo longioribus, alis subcinereis; *Fœm.* antennis corpore vix longioribus, oviductu brevi lamellis duabus parvis flavescentibus, alis subflavescentibus. Long. $\frac{3}{5}$ lin.

Wings with black pubescence; veins blackish, or dark brown; transverse veinlet joining the middle of the subcostal vein; anal vein and its second branch forming an obtuse angle. *Male.* Antennæ twice

the length of the body; double joints as long as the petioles. *Fem.* Antennæ rather longer than the body; petioles one-fourth shorter than the joints. Oviduct short, with two small yellowish valves.

Lives in most species of *Polyporus.*

49. **socialis,** Winn. Linn. Ent. viii. 251. 38 (1853). *Fœm.* flava, antennis pallide fuscis, *thorace vittis tribus fuscis,* alis subcinereis, venis pallide fuscis, oviductu brevissimo lamellis duabus rotundatis. Long. $\frac{2}{3}$ lin.

Fem. Yellow. Antennæ pale brown, as long as the body; *joints and their petioles of equal length. Thorax with three brown stripes.* Wings greyish, with grey pubescence; veins pale brown; transverse veinlet joining the middle of the subcostal vein; cubital vein ending at almost in front of the tip of the wing; second branch of the anal vein curved to the hind border. Oviduct very short, with two rounded valves.

Lives in the woody excrescences on the branches of most species of *Rubus,* with the larvæ of *Lasioptera Rubi.*

50. **brevis,** n. *Mas,* testacea, brevis, capite nigro, antennis validis, *articulorum petiolis brevissimis, thoracis disco fuscescente,* alis subcinereis, halteribus albidis, pedibus validis testaceis. Long. $\frac{3}{4}$; alar. 2 lin.

Male. Testaceous, short. Head black. *Antennæ* twelve-jointed, stout, submoniliform, verticillate-pilose; *joints* double, elongate, subcylindrical, *with extremely short petioles. Disc of the thorax brownish.* Wings hardly greyish, ciliated; veins pale testaceous; subcostal much less than half the length of the wing; cubital almost straight; subanal not apparent beyond the fork of the anal; first branch of the anal distinct, slightly curved; second branch curved obliquely and rather abruptly to the border. Halteres whitish. Legs pale testaceous, rather short and stout.

Rare. (E.)

51. **minuta,** Winn. Linn. Ent. viii. 250. 37 (1853). *Mas,* rufescente-flava, antennis fuscis corpore duplo longioribus basi flavis, *thorace vittis tribus fuscis,* pectore nigricante, alis limpidis, venis fuscis, halteribus albis, *pedibus fuscis subtus pallidis.* Long. $\frac{1}{3}$ lin.

Male. Reddish-yellow, with hoary hairs. Antennæ brown, yellow at the base, twice the length of the body. *Thorax with three almost contiguous brown stripes.* Pectus blackish. Wings limpid, with blackish-grey pubescence; veins slender, brown; transverse veinlet beyond the middle of the subcostal vein; cubital vein straight, slightly curved hindward near the tip, ending at almost in front of the tip of the wing. Halteres white. *Legs brownish, pale beneath.*

Habits unknown.

52. **geniculata,** Winn. Linn. Ent. viii. 251. 39 (1853). *Mas,* flava, antennis fuscis corpore fere duplo longioribus, *thorace fusco-trivittato,* alis limpidis, venis fuscis, abdomine flavo-fusco incisuris albidis,

pedibus nigris, coxis, genubus, femoribus basi tibiisque apice flavis. Long. ½ lin.

Male. Yellow. Antennæ brown, nearly twice the length of the body; joints as long as their petioles, rather shorter towards the tips of the antennæ. *Thorax with three almost contiguous brown stripes.* Wings limpid, with grey pubescence; veins brownish; transverse veinlet joining the middle of the subcostal vein; anal vein curved to the hind border. Abdomen yellowish-brown, with whitish sutures. *Legs black; coxæ, femora at the base, knees, and tips of the tibiæ yellow.*

Habits unknown.

53. **peregrina,** Winn. Linn. Ent. viii. 252. 40 (1853). *Mas,* flava, antennis fuscis basi flavis corpore duplo longioribus, *thorace vittis tribus fuscis,* alis limpidis, venis fuscis, halteribus *pedibus*que *pallidis, tarsis pallide fuscis.* Long. ⅔ lin.

Male. Yellow. Antennæ brown, yellow at the base, twice the length of the body; petioles as long as the double joints towards the tips of the antennæ, the apical petioles even longer. *Thorax with three brown stripes.* Wings limpid, with dark grey pubescence; veins brown; margins stout, blackish-brown; transverse veinlet at beyond the middle of the subcostal vein. Halteres and *legs pale; tarsi brownish.*

Lives in galls on the leaves of *Prunus spinosa* and *Salix aurita,* and generally changes in the earth; those galls also produce *Acari.*

54. **nana,** Winn. Linn. Ent. viii. 252. 41 (1853). Flava, antennis pallide fuscis, *thorace vittis tribus fuscis,* alis limpidis, venis fuscis, *pedibus pallide fuscis, tarsis obscurioribus; Mas,* antennis corpore duplo longioribus; *Fœm.* antennis corpore vix brevioribus, abdomine fulvo, oviductu brevi lamellis duabus rotundatis. Long. ¼ lin.

Wings with grey pubescence; veins brown, very slender; transverse veinlet at two-thirds of the length of the subcostal vein; second branch of the anal vein curved to the hind border. *Legs pale brown; tarsi darker. Male.* Antennæ twice the length of the body; joints as long as their petioles; double joints twice the length of the single joints. *Fem.* Antennæ almost as long as the body; joints longer by half than their petioles. Abdomen tawny. Oviduct short, with two rounded valves.

Habits unknown.

55. **tibialis,** Winn. Linn. Ent. viii. 253. 42 (1853). *Mas,* pallide flava, antennis fuscis corpore duplo longioribus, alis limpidis, venis nigris, halteribus albis, abdomine fulvo, *pedibus albidis, femoribus tarsisque supra nigro-fuscis.* Long. ½ lin.

Male. Pale yellow. Antennæ brown, twenty-six-jointed, twice the length of the body; double joints as long as their petioles. Thorax with whitish hairs, among which are a few black bristles. Wings limpid, with black pubescence; veins black; transverse veinlet beyond the middle of the subcostal vein; second branch of the anal vein curved

to the hind border. Halteres white. Abdomen tawny, with hoary hairs. *Legs whitish; femora and tarsi blackish-brown above.*

Lives in the withered top-buds of *Salix alba,* in which the larvæ of *C. salicina* also dwell.

56. **fascipennis,** Winn. Linn. Ent. viii. 254. 43 (1853). *Fulva,* antennis pallide fuscis basi flavis, thorace vittis tribus abbreviatis fuscis, *alis limpidis, fascia angulosa violaceo-fusca,* venis fuscis, pedibus pallidis, tarsis apice fuscescentibus; *Mas,* antennis corpore longioribus; *Fœm.* antennis corpore brevioribus, oviductu brevi lamellis ovatis. Long. $\frac{1}{2}$ lin.

Tawny. Wings whitish-limpid, with a zigzag violet-brown band; transverse veinlet pale, distinct, joining the middle of the subcostal vein; anal vein and its second branch forming an obtuse angle. *Male.* Antennæ longer by half than the body; joints and their petioles equally long. *Fem.* Antennæ three-fourths of the length of the body; joints not twice the length of their petioles. Oviduct short, with oval valves.

Lives in decayed wood.

57. **pulchella,** Winn. Linn. Ent. viii. 254. 44 (1853). *Flava,* antennis fuscis basi albidis, thorace vittis tribus fuscis, lateribus pectoreque nigricantibus, *alis limpidis fascia maculaque apicali violaceo-fuscis,* venis fuscis, halteribus albis, pedibus albidis, tarsis basi et articulis apice fuscis; *Mas,* antennis corpore multo longioribus; *Fœm.* antennis corpore paullo brevioribus, oviductu brevi lamellis duabus ovatis. Long. $\frac{1}{2}$ lin.

Yellow. Wings limpid, with a band and apical spot of a violet-brown colour; transverse veinlet beyond the middle of the subcostal vein. *Male.* Antennæ longer by half than the body; double joints as long as their petioles; simple joints half the length of their petioles. *Fem.* Antennæ a little shorter than the body; joints as long as their petioles, rather shorter towards the base of the antennæ. Oviduct short, with two oval valves.

Lives in decayed beech-wood.

58. **callida,** Winn. Linn. Ent. viii. 255. 45 (1853). *Fulva,* antennis fuscis basi flavis, thorace vittis tribus nigro-fuscis, pectore nigricante, *alis infuscatis,* venis fuscis, halteribus albis, pedibus fuscis; *Mas,* antennis corpore duplo longioribus; *Fœm.* antennis corpore paullo brevioribus, abdomine carneo, oviductu brevi, lamellis duabus longi-ovatis. Long. $\frac{1}{2}$–$\frac{2}{3}$ lin.

Tawny. Wings clouded with brown; pubescence black; transverse veinlet very pale, at beyond the middle of the subcostal vein. *Male.* Antennæ twice the length of the body; double joints as long as their petioles; single joints half the length of their petioles. *Fem.* Antennæ shorter than the body by one-fourth; joints and their petioles of equal length. Oviduct short, with two elongated oval valves.

Very nearly allied to *C. Anthemidis,* Loew. Lives in the seed-capsules of *Papaver Rhœas* and *P. dubium* with *C. Papaveris.*

59. **arcuata,** Winn. Linn. Ent. viii. 256. 46 (1853). *Fusca*, antennis basi flavis, scutello flavo, metathorace nigro, *alis limpidis cinereo subvariis, maculis duabus arcuatis violaceo-fuscis*, halteribus albis, abdomine fulvo incisuris albis, tarsis nigro-fuscis; *Mas*, antennis corpore longioribus; *Fœm.* antennis corporis longitudine, oviductu brevi lamellis duabus longi-ovatis. Long. $\frac{1}{2}$–$\frac{2}{3}$ lin.

Brown. Wings limpid, slightly clouded with grey, and with two curved violet-brown spots; veins brown; transverse veinlet at a little beyond the middle of the subcostal vein. *Male.* Antennæ twenty-six jointed, one-third longer than the body; double joints as long as their petioles; single joints a little shorter. *Fem.* Antennæ as long as the body; joints a little longer than their petioles. Oviduct short, with two elongated oval valves.

Lives in the pulp of most Syngenesious plants; the fly has been reared from decayed wood and fungi.

60. **maculata,** Winn. Linn. Ent. viii. 258. 47 (1853). *Fœm. carnea*, palpis, antennis pedibusque albidis, antennis 14-articulatis corpore paullo brevioribus, thorace fuscescente, *alis limpidis maculis septem violaceo-fuscis*, oviductu brevissimo lamellis duabus longiusculis. Long. $\frac{3}{4}$ lin.

Fem. Flesh-colour. Palpi and antennæ whitish, fourteen-jointed, a little shorter than the body; joints and their petioles of about equal length. Thorax brownish. *Wings limpid, with seven violet-brown spots;* transverse veinlet at a little beyond half the length of the subcostal vein; second branch of the anal vein curved to the hind border. Oviduct very short, with two rather long valves. Legs whitish; tarsi above and tips of the tibiæ brown.

Habits unknown.

61. **nubeculosa,** n. *Mas, albido-cinerea*, capite antennisque nigris, thoracis disco fusco, *alis subcinereis fusco subnebulosis*, venis nigris, halteribus albidis, pedibus pallide testaceis fusco-subfasciatis. Long. $\frac{3}{4}$; alar. 2 lin.

Male. Whitish-cinereous. Head and antennæ black. Antennæ twenty-two-jointed, moniliform, thickly verticillate-pilose, full as long as the body; joints alternately larger and smaller, with extremely short petioles. *Disc of the thorax brown. Wings pale greyish, slightly mottled with pale brown;* veins black; subcostal vein much less than half the length of the wing; cubital very slightly curved; subanal distinct, almost straight; first branch of the anal slight, running very near to the subanal; second branch curved very abruptly and hardly obliquely to the hind border. Halteres whitish. Legs pale testaceous, slender, not long, with a few light brownish bands.

Not common. (E.)

62. **plagiata,** n. *Mas, pallide testacea*, capite nigro, antennis nigricantibus basi pallide testaceis corpore vix brevioribus, *alis subtes-*

taceis cinereo-nebulosis, pedibus mediocriter longis, fasciis latis pallide fuscis. Long. $\frac{2}{3}$; alar. $1\frac{1}{2}$ lin.

Male. Pale testaceous. Head black. Antennæ blackish, pale testaceous at the base, moniliform, verticillate-pilose, nearly as long as the body; joints simple, nearly oval, rather longer than their petioles. *Wings with a slight testaceous tinge, mottled with grey;* veins testaceous; subcostal vein a little less than half the length of the wing; cubital straight; subanal indistinct; first branch of the anal slight; second branch curved obliquely but abruptly to the hind border. Legs slender, moderately long, with broad, pale brown bands.

Not common. (E.)

63. **decora,** n. *Mas, albida*, capite nigro, antennis nigricantibus basi albis, *alis albis fusco-bifasciatis*, venis halteribus pedibusque albis. Long. $\frac{1}{2}$; alar. $1\frac{1}{2}$ lin.

Male. Whitish. Head black. Antennæ blackish, white at the base, twelve-jointed ?, moniliform, verticillate-pilose, not shorter than the body; joints simple, nearly oval, longer than their petioles. *Wings white, with two brown bands, which are paler towards the hind border;* veins and halteres white. Legs white, slender, moderately long.

Rare. Found near Chepstow, Monmouthshire. (E.)

64. **Loti,** Deg. Ins. vi. 157. 29. Pl. 27 (1778); Meig.; Mcq.; Bremi; Loew; Winn. *Nigro-fusca*, antennis fuscis, thorace e pilis albo-flavis bivittato, *scutello albo-flavo*, alis limpidis, halteribus albidis, ventre sordide flavo fusco-notato, *pedibus piceis subtus albidis; Mas*, antennis corpore paullo longioribus; *Fœm.* antennis corpore brevioribus, oviductu corpore longiore basi nigro nitido, lamellis nullis. Long. $\frac{1}{2}$–$\frac{3}{4}$ lin.

Wings with dark grey pubescence; veins brown; transverse veinlet at a little before the middle of the subcostal vein; second branch of the anal vein curved to the hind border. *Male.* Antennæ a little longer than the body; joints mostly cylindrical, as long as their petioles. *Fem.* Antennæ two-thirds of the length of the body; third joint longer by half than the fourth; joints about six times the length of their petioles. Oviduct black, shining, longer than the body; third segment yellow, without valves.

Lives in the blossoms of *Lotus corniculatus* and of *Medicago sativa;* generally changes to a pupa in the earth.

65. **Linariæ,** Kaltenbach, MSS.; Winn. Linn. Ent. viii. 260. 49 (1853). *Flava*, antennis fuscescente-flavis, *thoracis disco fuscescente* aut vittis tribus fuscis, alis limpidis, venis flavis, halteribus albis, abdomine sordide fusco-flavo, pedibus fuscescentibus subtus albo-flavidis; *Mas*, antennis 26-articulatis, corpore multo longioribus; *Fœm.* antennis 14-articulatis, corpore paullo brevioribus, oviductu producto lamellis nullis. Long. $\frac{1}{2}$–$\frac{3}{4}$ lin.

Yellow. Disc of the thorax brown. Wings with whitish pubescence;

transverse veinlet at beyond the middle of the subcostal vein; second branch of the anal vein with a short curve to the hind border. *Male.* Antennæ twenty-six-jointed, longer by half than the body; petioles towards the base rather longer than the joints, nearly twice their length towards the tips. *Fem.* Antennæ fourteen-jointed, full three-fourths of the length of the body; joints about the middle part about four times the length of their petioles. Oviduct elongated, without valves; third segment whitish.

Lives and assumes the pupa state in the tufts on the tips of the buds of *Linaria vulgaris.*

66. **flava,** Meig. Zw. i. 99. 17 (1818).—*hilarella?* Zett. *Mas, flava, capite nigro,* antennis nigris aut fuscis, corporis longitudine, alis albido-limpidis, venis pedibusque pallide flavis, halteribus albis. Long. 1; alar. 3 lin.

Male. Yellow. Head black. Antennæ black or brownish, sixteen-jointed, moniliform, verticillate-pilose, as long as the body; joints obconical, alternately longer and shorter, not longer than their petioles, which are pale yellow. Wings nearly limpid, slightly whitish; veins pale yellow; subcostal vein rather less than half the length of the wing; cubital slightly curved; subanal almost obsolete; first branch of the anal distinct; second branch curved obliquely and not abruptly to the hind border. Halteres white. Legs pale yellow, long, slender.

Not rare. (E. I.)

67. **abrupta,** n. *Mas, fusca,* antennis nigris corpore vix brevioribus, articulorum petiolis brevissimis, *scutello albido,* alis sublimpidis, venis halteribusque albidis, abdomine pedibusque pallide testaceis. Long. $1\frac{1}{4}$; alar. $3\frac{1}{2}$ lin.

Male. Brown. Antennæ black, twelve-jointed?, moniliform, verticillate-pilose, nearly as long as the body; joints elliptical, with extremely short petioles. *Scutellum whitish.* Wings nearly limpid; veins whitish; subcostal vein less than half the length of the wing; cubital slightly curved; subanal distinct, nearly straight; first branch of the anal obsolete, except at its base; second branch curved abruptly and slightly obliquely to the hind border. Halteres whitish. Abdomen and *legs pale testaceous.* Legs moderately long and slender.

Rare. (E.)

68. **concolor,** n. *Mas, nigra,* antennis corporis longitudine, alis sublimpidis, venis pallide fuscis, halteribus albis, pedibus testaceis. Long. $1\frac{3}{4}$–2; alar. $3\frac{1}{2}$–4 lin.

Male. Black. Antennæ twenty-jointed, moniliform, verticillate-pilose, as long as the body; joints simple, elliptical, the incrassated part longer than the petiole. Wings nearly limpid, not ciliated; veins pale brown; subcostal vein half the length of the wing; cubital straight, ending at the tip of the wing; subanal almost obsolete; first branch of the anal slight but distinct; second branch curved very abruptly to

the hind border, forming a nearly right angle. Halteres white. Legs dull testaceous, long, slender.

Rare. (E.)

69. **albiceps,** n. *Mas, flava, capite niveo,* antennis nigris basi flavis, alis limpidis, venis pallide flavis, abdomine pedibusque albidis. Long. $1\frac{1}{2}$; alar. 4 lin.

Yellow. Head snow white. Antennæ twelve-jointed?, black, pale yellow at the base, moniliform, verticillate-pilose, rather shorter than the body; joints simple, subelliptical, about twice the length of their petioles. Wings limpid; veins pale yellow; subcostal vein less than half the length of the body; cubital slightly curved; subanal indistinct; first branch of the anal distinct; second branch curved abruptly and slightly obliquely to the hind border. Abdomen and legs whitish, the latter long and slender.

Rare. (E.)

70. **elegans,** n. *Fœm. testacea, capite antennisque fuscis,* his corpore multo brevioribus, articulis cylindricis, alis limpidis, venis testaceis, halteribus albidis, pedibus pallide testaceis, tarsis posticis albis. Long. $1\frac{1}{2}$; alar. 4 lin.

Fem. Testaceous. Head and antennæ *brown.* Antennæ eleven-jointed, subfiliform, verticillate-pilose, much shorter than the body; joints cylindrical, about four times the length of their petioles. Thorax with three contiguous tawny stripes. Wings limpid; veins testaceous; subcostal vein rather less than half the length of the wing; cubital curved, ending at a little distance from the tip of the wing; subanal very slight; first branch of the anal distinct, running very near to the subanal; second branch curved obliquely and rather abruptly to the border. Halteres whitish. Legs pale testaceous, long, slender; hind tarsi white.

Not common. (E.)

71. **latipennis,** n. *Mas, testacea,* capite nigro, antennis pallide fuscis basi testaceis, corpore brevioribus, *alis latis* sublimpidis, venis *pedibus*que *pallide testaceis,* halteribus albidis, *abdomine fusco apice testaceo.* Long. $\frac{2}{3}$; alar. $2\frac{2}{3}$ lin.

Male. Testaceous. Head black. Antennæ fourteen-jointed, pale brown, testaceous at the base, moniliform, verticillate-pilose, shorter than the body; joints simple, subelliptical, much longer than their petioles, which are testaceous. *Wings broad,* ciliated, nearly limpid; veins pale testaceous; subcostal vein less than half the length of the wing; cubital straight; subanal obsolete; first branch of the anal distinct; second branch curved very abruptly and hardly obliquely to the hind border. Halteres whitish. *Abdomen brown, testaceous at the tip. Legs pale testaceous,* long, slender.

Not common. (E.)

72. **brevicornis,** n. *Mas, testacea,* capite nigro, antennis 12-*ar-*

ticulatis fuscescentibus basi testaceis corporis dimidio non longioribus, *thoracis disco fusco, alis subcinereis,* venis fuscescentibus, halteribus pedibusque albidis. Long. 1; alar. 2 lin.

Male. Testaceous. Head black. *Antennæ* brownish, testaceous at the base, *twelve-jointed,* moniliform, verticillate-pilose, about half the length of the body; joints short, elliptical, a little longer than their petioles, which are testaceous. *Disc of the thorax brown. Wings slightly greyish;* veins brownish; subcostal vein less than half the length of the wing; cubital almost straight; subanal obsolete; first branch of the anal distinct; second branch curved obliquely and not abruptly to the hind border. Halteres and *legs whitish,* the latter slender, not long.

Not common. (E.)

73. **Rumicis,** Loew, Pr. Pos. Gym. 34. 48 (1850); Winn. *Flavo-fusca,* antennis fuscis, *thoracis dorso cinereo-fusco, alis subcinereis,* venis halteribusque fuscis, pedibus fuscis subtus flavescentibus; *Mas,* antennis 26-articulatis corpore fere duplo longioribus; *Fœm.* antennis corpore paullo brevioribus, 14-articulatis, oviductu attenuato lamellis nullis, segmentis primo et secundo albidis. Long. $\frac{1}{2}$–$\frac{3}{4}$ lin.

Yellowish-brown. Thorax above cinereous-brown. Wings greyish, with grey pubescence; transverse veinlet beyond the middle of the subcostal vein; cubital somewhat convex behind towards the tip of the wing; second branch of the anal vein curved towards the hind border. *Male.* Antennæ 26-jointed, almost twice the length of the body; joints towards the base rather shorter than the petioles, and towards the tips little more than half their length. *Fem.* Antennæ fourteen-jointed, as long as three-fourths of the body; joints mostly three or four times the length of their petioles. Oviduct elongated, without valves; second and third segments whitish.

Lives in the blossoms of most species of *Rumex.*

74. **albipes,** n. *Mas, fusca, antennis* nigris corpore paullo longioribus, *articulorum petiolis brevissimis, alis subcinerascentibus,* halteribus pedibusque albidis. Long. $\frac{3}{4}$; alar. 2 lin.

Male. Brown. Antennæ black, twenty-jointed, moniliform, thickly verticillate-pilose, a little longer than the body; joints a little longer than broad, with extremely short petioles. *Wings very slightly greyish;* veins black; subcostal vein rather less than half the length of the wing; cubital very slightly curved; subanal almost obsolete; first branch of the anal distinct, nearly straight; second branch curved abruptly and slightly obliquely to the hind border. Halteres and legs whitish; the latter slender, of moderate length.

Not common. (E.)

75. **terminalis,** n. *Mas, fusca,* capite *antennis*que nigris, his corpore paullo longioribus, *articulorum petiolis longis* testaceis, *scutello albido, alis subcinereis,* halteribus pedibusque albidis. Long. $1\frac{1}{2}$; alar. 4 lin.

Male. Brown. Head and antennæ black. Antennæ eighteen-jointed, moniliform, verticillate-pilose, a little longer than the body; joints short, elliptical, very little longer than their petioles, which are pale testaceous. *Scutellum whitish. Wings slightly greyish,* hardly ciliated; veins blackish; subcostal vein ending at nearly half the length of the wing; cubital straight; subanal slight, obsolete from a little beyond the fork of the anal to the tip of the wing; first branch of the anal distinct, nearly straight; second branch straight, inclined very abruptly and hardly obliquely to the hind border, forming an almost right angle. Halteres whitish. Legs whitish, long, slender.

Not common. (E.)

76. **incompleta,** n. *Mas, cinerea,* gracillima, capite antennisque nigris, his corpore brevioribus, articulorum petiolis sat longis, *alis subcinereis,* halteribus nigris. Long. 1; alar. 3 lin.

Male. Cinereous, very slender. Head and antennæ black. Antennæ twelve-jointed?, moniliform, verticillate-pilose, shorter than the body; joints simple, nearly oval, rather longer than their petioles. *Wings greyish;* veins black; subcostal vein rather less than half the length of the wing; cubital straight; subanal distinct from the base to some distance beyond the fork of the anal; first branch of the anal very slight, rather indistinct; second branch curved very abruptly and hardly obliquely to the border. Halteres black. Legs slender, rather long.

Not common. (E.)

77. **expandens,** n. *Mas, nigro-cinerea,* antennis corpore paullo brevioribus, *thoracis lateribus canis, alis cinereis,* venis nigris, halteribus pedibusque cinereis. Long. $1\frac{1}{2}$; alar. $3\frac{1}{2}$ lin.

Male. Greyish-black. Antennæ black, twenty-jointed?, moniliform, verticillate-pilose, rather shorter than the body; joints elliptical, full twice the length of their petioles. *Thorax hoary on each side. Wings grey,* pubescent, ciliated; veins black; subcostal vein much less than half the length of the wing; cubital very slightly curved; subanal distinct; first branch of the anal very slight; second branch curved obliquely and rather abruptly to the hind border. Halteres and legs cinereous.

Not common. (E.)

78. **semiopaca,** n. *Mas, fusca,* capite antennisque nigris corporis longitudine, *thoracis lateribus albidis, alis cinereis subnebulosis,* halteribus albis, pedibus albidis. Long. 1; alar. 3 lin.

Male. Brown. Head and antennæ black. Antennæ fourteen-jointed?, verticillate-pilose, submoniliform, as long as the body; joints subelliptical, full twice the length of their petioles. *Sides of the thorax whitish. Wings grey,* pubescent, *very indistinctly mottled,* not ciliated; veins blackish; subcostal vein nearly half the length of the wing; cubital almost straight; subanal distinct, straight; first branch of the anal very slight, running very near the subanal; second branch curved very

abruptly and hardly obliquely to the hind border. Halteres white. Legs whitish, slender, moderately long.

Not common. (E.)

79. **atriceps,** n. *Mas, obscure fusca,* capite nigro, antennis corpore brevioribus, *thoracis lateribus testaceis, alis cinereis* sat angustis, halteribus pedibusque fuscis. Long. $1\frac{1}{2}$; alar. 3 lin.

Male. Dark brown, long, slender. Head black. Antennæ fourteen-jointed, black, moniliform, verticillate-pilose, shorter than the body; joints simple, elongate-oval, about twice the length of their petioles. *Sides of the thorax dull testaceous. Wings grey,* rather narrow; veins black; subcostal vein rather less than half the length of the wing; cubital nearly straight; subanal very faint; first branch of the anal slight; second branch curved obliquely and not abruptly to the hind border. Halteres and *legs brown,* the latter rather long and slender.

Not common. (E.)

80. **repleta,** n. *Mas, fusca,* antennis corpore paullo brevioribus, articulorum petiolis brevissimis, *thoracis lateribus testaceis, alis subcinereis,* venis abdomineque pallide fuscis, halteribus *pedibus*que *testaceis.* Long. $\frac{3}{4}$; alar. 2 lin.

Male. Brown. Antennæ fourteen-jointed?, moniliform, slightly verticillate-pilose, rather shorter than the body; joints subelliptical, with very short petioles. *Sides of the thorax testaceous. Wings greyish;* veins pale brown; subcostal vein about half the length of the wing; cubital straight; subanal and first branch of the anal indistinct; second branch curved obliquely but rather abruptly to the hind border. Halteres testaceous. Abdomen pale brown. *Legs testaceous,* rather short.

Rare. (E.)

81. **invaria,** n. *Mas, fusca, capite* antennis *thoracisque disco nigris,* antennis corpore longioribus, *alis subcinereis,* venis nigricantibus, halteribus albidis apice fuscis, *pedibus testaceis.* Long. $1\frac{1}{2}$; alar. 4 lin.

Male. Brown. Head, antennæ, and disc of the thorax black. Antennæ twenty-jointed?, moniliform, verticillate-pilose, longer than the body; joints simple, nearly elliptical, much longer than their petioles. *Wings greyish,* slightly ciliated; veins blackish; subcostal vein ending at half the length of the wing; cubital nearly straight; subanal visible, but indistinct; first branch of the anal slight, straight; second curved very abruptly and hardly obliquely to the hind border. Halteres whitish, with brown knobs. *Legs testaceous,* long, slender.

Not common. (E.)

82. **maura,** n. *Mas, nigra,* antennis 16-articulatis corpore paullo brevioribus, articulorum petiolis sat longis, *alis cinereis,* pedibus fuscis. Long. $1\frac{1}{4}$; alar. $2\frac{1}{2}$ lin.

Male. Black. Antennæ sixteen-jointed, moniliform, verticillate-pilose, a little shorter than the body; joints simple, short, elliptical, a

little longer than their petioles. *Wings grey*, pubescent; veins black; subcostal vein rather less than half the length of the wing; cubital straight; subanal almost obsolete; first branch of the anal slight but distinct, nearly straight; second curved abruptly and slightly obliquely to the hind border. Legs brown.

Not common. (E.)

83. **evanescens,** n. *Mas*, alba, capite nigro, antennis pallide testaceis corpore brevioribus, alis albis albo-venosis. Long. $\frac{1}{2}$; alar. $1\frac{1}{2}$ lin.

Male. White. Head black. Antennæ pale testaceous, moniliform, verticillate-pilose, shorter than the body. Wings white, with white veins.

Rare. (E.)

84. **Tritici,** Kby, Linn. Trans. iv. 232 (1798); Stew.; Turt. *Pallide testacea, capite nigro, antennis fuscis*, alis limpidis, *venis testaceis; Mas*, antennis corpore duplo longioribus; *Fœm.* antennis corpore brevioribus. Long. $1\frac{1}{4}$; alar. 2 lin.

Pale testaceous. Head black. Antennæ twelve-jointed?, *brown.* Wings limpid, ciliated; *veins testaceous;* subcostal vein less than half the length of the wing; cubital ending very little behind the tip of the wing; subanal distinct; anal and its second branch forming a nearly right angle, the latter curved abruptly to the hind border; first branch very indistinct, running very near to the subanal vein. *Male.* Antennæ as long as the body; joints elongated, double, with long whorls of hairs, as long as their petioles. *Fem.* Antennæ shorter than the body. Oviduct short.

The Wheat Midge. Generally distributed. (E. S. I.)

85. **filipes,** n. *Fœm. obscure testacea, capite antennisque nigris*, horum articulis vix petiolatis, alis limpidis, venis nigricantibus, halteribus pedibusque albidis. Long. $1\frac{1}{2}$; alar. 3 lin.

Fœm. Dull testaceous. Head black. Antennæ black, moniliform, verticillate-pilose, with rather more than twenty joints, which are hardly petiolated. Wings limpid; veins blackish; subcostal vein ending at much before half the length of the wing; cubital curved towards its tip, ending near the tip of the wing; subapical indicated by a streak which runs parallel and very near to the first fork of the subanal; second fork of the subanal curved abruptly to the border, forming a very acute angle with the first fork. Halteres whitish. Oviduct attenuated, moderately long. Legs whitish, long, very slender.

Rare. In the British Museum. (E.)

86. **ochracea,** Winn. Linn. Ent. viii. 262. 51 (1853). *Mas, citrina*, albo-pilosa, *antennis corpore multo longioribus*, articulis longe petiolatis, alis limpidis cinereo-pubescentibus, venis pallide fuscis. Long. $\frac{3}{4}$ lin.

Lemon-colour, with whitish hairs. Antennæ longer by half than the

body; double joints as long as their petioles, rather shorter towards the tips. Wings limpid, with grey pubescence; veins pale brown; transverse veinlet at before the middle of the subcostal vein; second branch of the anal curved very abruptly to the hind border.

Habits unknown.

87. **modesta,** Winn. Linn. Ent. viii. 262. 52 (1853). *Mas, pallide flava,* albido-hirta, *antennis corpore duplo longioribus,* articulis longe petiolatis, alis maximis limpidis cinerco-hirtis, venis fuscis, halteribus albis. Long. ½ lin.

Pale yellow, with whitish hairs. *Antennæ nearly twice the length of the body;* double joints as long as their petioles, rather longer towards the base of the antennæ, rather shorter towards the tips. Wings very broad, limpid, with grey pubescence and with brown veins; transverse veinlet joining the middle of the subcostal vein; anal vein and its second branch forming a rounded obtuse angle.

Habits unknown.

88. **disjuncta,** n. *Mas,* pallide testacea, antennis 12-articulatis nigris corpore paullo longioribus, alis sublimpidis, venis nigricantibus, halteribus pedibusque albidis, alis sublimpidis. Long. 1; alar. 3 lin.

Male. Pale testaceous, slender. Antennæ black, twelve-jointed, moniliform, verticillate-pilose, a little longer than the body; joints simple, oval, much shorter than their petioles, which are whitish. Wings nearly limpid; veins blackish; subcostal vein about one-third of the length of the wing; cubital curved, ending at a short distance from the tip of the wing; subanal and first branch of the anal very slight; second branch curved obliquely, but rather abruptly to the hind border. Halteres and legs whitish, the latter long and slender.

Rare. (E.)

89. **pubescens,** n. *Mas,* testacea, antennis 14-articulatis nigris corpore longioribus, alis subcinereis, *venis testaceis.* Long. 1½–2; alar. 4–5 lin.

Male. Testaceous. Antennæ black, fourteen-jointed, moniliform, verticillate-pilose, longer than the body; joints nearly round, about half the length of their petioles, which are testaceous; whorls of hairs very long. Wings slightly greyish, pubescent, ciliated; *veins dull testaceous;* subcostal vein rather less than half the length of the wing; cubital curved, ending on the hind border at some little distance from the tip of the wing; subanal distinct; first branch of the anal slight, running near to the subanal; second branch curved obliquely and abruptly to the hind border. Legs long, slender.

Not rare. (E.)

90. **mœsta,** n. Testacea, antennis nigris, alis subcinereis, *venis fuscescentibus; Mas,* antennis corpore brevioribus; *Fœm.* antennis corpore multo brevioribus, articulis vix petiolatis, oviductu longissimo. Long. 1½; alar. 2½–3 lin.

Testaceous. Antennæ black, verticillate-pilose. Wings slightly greyish, pubescent, ciliated; *veins brownish;* subcostal vein less than half the length of the wing; cubital very slightly curved, ending very near the tip of the wing; subanal and first branch of the anal slight; second branch curved very abruptly and hardly obliquely to the hind border. Halteres and legs pale testaceous, the latter rather long and slender. *Male.* Antennæ fourteen-jointed, shorter than the body; joints nearly cylindrical, about four times longer than their petioles. *Fem.* Antennæ fourteen-jointed?, much shorter than the body; joints cylindrical, hardly petiolated. Oviduct very long.

Not common. (E.)

91. **ciliata,** n. *Fœm.* obscure testacea, antennis nigris, corpore brevioribus, *alis* subcinereis *late ciliatis, venis nigricantibus,* halteribus pedibusque pallide testaceis, oviductu brevi. Long. $1\frac{3}{4}$; alar. 4 lin.

Fem. Dull testaceous, pubescent. Antennæ black, fourteen-jointed?, moniliform, verticillate-pilose, shorter than the body; joints simple, nearly oval, with very short petioles. *Wings pubescent,* slightly greyish, *deeply ciliated; veins blackish;* subcostal vein much less than half the length of the wing; cubital slightly curved, ending at some little distance from the tip of the wing; subanal distinct; first branch of the anal very slight, running very near the subanal; second branch curved abruptly, and slightly obliquely to the hind border. Halteres pale testaceous. Oviduct short. Legs pale testaceous, pubescent, rather long and slender.

Not common. (E.)

92. **solennis,** n. *Mas,* testacea, gracilis, antennis 14-articulatis corporis longitudine, alis subcinereis, *venis nigricantibus,* halteribus pallide testaceis. Long. 1; alar. 3 lin.

Male. Testaceous, slender. Antennæ black, fourteen-jointed, moniliform, verticillate-pilose, as long as the body; joints simple, nearly round, little more than half the length of their petioles. *Wings* slightly greyish, *ciliated; veins blackish;* subcostal vein less than half the length of the wing; cubital slightly curved, ending at a little distance from the tip; subanal and first branch of the anal slight; second branch curved abruptly and slightly obliquely to the hind border. Halteres pale testaceous. Legs long, slender.

Not common. (E.)

93. **dumetorum,** Winn. Linn. Ent. viii. 264. 55 (1853). *Mas,* flava, *antennis* fuscescentibus basi flavis *corpore multo longioribus,* articulis longe petiolatis, thorace vittis tribus parvis aut fere obsoletis flavo-fuscis, alis limpidis cinereo-pilosis, venis pallide fuscis, halteribus albis, pedibus albido-flavis, femoribus tibiisque anticis supra coxisque nigro-fuscis. Long. $\frac{3}{4}$ lin.

Male. Yellow. *Antennæ* brownish, yellow at the base, *longer by half than the body;* double joints as long as their petioles, and towards the

base of the antennæ rather longer. Thorax with three slender yellowish-brown stripes. Wings limpid, with grey pubescence; veins pale brown; transverse veinlet joining the middle of the subcostal vein; anal vein and its second branch forming an obtuse rounded angle. Halteres white. Legs whitish-yellow; fore femora and fore tibiæ above and coxæ blackish-brown.

Habits unknown.

94. **flaveolata,** Winn. Linn. Ent. viii. 265. 56 (1853). *Mas,* obscure flava, *antennis* fuscis basi flavis *corpore plus duplo longioribus,* articulis longe petiolatis, thorace vittis tribus nigris, alis limpidis cinereo-hirtis, halteribus albis, abdomine fulvo albo-piloso, pedibus flavis. Long. $\frac{1}{2}$ lin.

Dark yellow. *Antennæ* brown, yellow at the base, *more than twice the length of the body;* double joints as long as their petioles. Thorax with three blackish stripes. Wings limpid, with brown veins, in some aspects whitish, with white veins, in others æneous-yellow; transverse veinlet joining the middle of the subcostal vein; anal vein and its second branch forming an almost right angle. Halteres white. Abdomen tawny, with white hairs. Legs yellow.

Habits unknown.

95. **coniophaga,** Winn. Linn. Ent. viii. 267. 60 (1853). Flava, antennis fuscis basi flavis, thorace vittis tribus fere connexis fuscis, alis limpidis cinereo-hirtis, halteribus albidis, *abdominis marginibus posticis albo-hirtis,* pedibus longis fuscis subtus flavescentibus; *Mas, antennis corpore longioribus,* articulis duplicatis longi-petiolatis; *Fœm.* antennis corpore brevioribus, articulis breviter petiolatis, oviductu brevi lamellis duabus subovatis minimis. Long. $\frac{2}{3}$—$\frac{3}{4}$.

Yellow. Thorax with three brown stripes. Wings limpid; transverse veinlet joining the middle of the subcostal vein; anal vein and its second branch forming a very slightly obtuse angle. Hind borders of the abdominal segments with white hairs. Legs brown. *Male. Antennæ nearly longer by one-half than the body;* double joints as long as their petioles. *Fem.* Antennæ shorter by about one-fourth than the body; subapical joints about four times the length of their petioles. Oviduct short, with two very small nearly oval valves.

Lives with *C. Ceomatis* on *Ceoma miniatum,* on the fallen leaves of the *Rora,* and feeds on that fungus; changes in the earth.

96. **invocata,** Winn. Linn. Ent. viii. 269. 61 (1853). Flava, antennis pallide fuscis, thorace vittis tribus fuscis, alis limpidis cinereo-hirtis, venis fuscis, halteribus apice fuscis aut omnino flavis, pedibus fuscis subtus flavido-albis, femoribus basi flavis; *Mas, antennis* 26-articulatis *corpore longioribus,* articulis duplicatis longi-petiolatis; *Fœm.* antennis 14-articulatis corpore paullo brevioribus, oviductu brevi lamellis duabus rotundatis pilosis. Long. $\frac{1}{2}$ lin.

Yellow. Thorax with three brown stripes. Wings limpid; trans-

verse veinlet situate beyond the middle of the subcostal vein; second branch of the anal vein curved to the hind border. *Male.* Antennæ twenty-six-jointed, longer by two-thirds than the body; double joints as long as their petioles. *Fem.* Antennæ fourteen-jointed, rather longer than the body. Oviduct short, with two round very hairy valves.

Lives with *C. acrophila* and *C. pavida* in the deformed tufts on the top leaves of *Fraxinus excelsior;* changes to a pupa in the earth.

97. **marginata,** n. *Mas*, testacea, *antennis* fuscescentibus *corpore longioribus, thoracis disco pallide fusco,* alis sublimpidis, *venis nigricantibus,* halteribus albidis, abdomine supra pallide fusco, lateribus testaceis. Long. 1¼; alar. 3 lin.

Male. Testaceous. *Antennæ* brownish, twelve-jointed?, moniliform, verticillate-pilose, *longer than the body;* joints nearly round, about half the length of their petioles, which are pale testaceous. *Disc of the thorax pale brown.* Wings nearly limpid; *veins blackish;* subcostal vein very much less than half the length of the wing; cubital slightly curved, ending at a short distance from the tip of the wing; subanal and first branch of the anal very slight; second branch curved abruptly and slightly obliquely to the hind border. Halteres whitish. Abdomen pale brown above, with a whitish testaceous stripe along each side. Legs long, slender.

Not common. (E.)

98. **fixa,** n. *Mas*, testacea, capite nigro, *antennis* 14-articulatis nigricantibus *corpore vix brevioribus*, thorace vittis tribus fulvis, alis sublimpidis, *venis testaceis*, halteribus pedibusque pallide testaceis. Long. 1; alar. 3 lin.

Male. Testaceous. Head black. *Antennæ* blackish, fourteen-jointed, submoniliform, verticillate-pilose, *nearly as long as the body;* joints cylindrical, about twice the length of their petioles, which are testaceous. Thorax with three pale tawny contiguous stripes. Wings nearly limpid; *veins testaceous;* subcostal vein rather less than half the length of the wing; cubital very slightly curved, ending near the tip of the wing; subanal distinct; first branch of the anal very slight, running very near the subanal; second branch curved very abruptly and hardly obliquely to the hind border. Halteres and legs pale testaceous, the latter long and slender.

Not common. (E.)

99. **apicalis,** n. *Fœm.* testacea, capite supra *antennis*que nigris, his 14-articulatis *corpore brevioribus*, thoracis disco fuscescente, alis sublimpidis, *venis fuscescentibus*, halteribus albidis, pedibus pallide testaceis. Long. 1; alar. 3½ lin.

Fem. Testaceous. Head above and antennæ black. *Antennæ* fourteen-jointed, moniliform, verticillate-pilose, *shorter than the body;* joints subelliptical, about thrice the length of their petioles. Disc of the

thorax brownish. Wings nearly limpid; *veins brownish;* subcostal vein much less than half the length of the wing; cubital slightly curved, ending near the tip of the wing; subanal distinct; first branch of the anal slight, running close to the subanal; second branch hardly curved, inclined obliquely and rather abruptly to the hind border. Halteres whitish. Legs pale testaceous, long, slender. Oviduct short.

Not common. (E.)

100. **latiuscula,** n. *Fœm.* testacea, antennis nigris basi testaceis, *thorace vittis tribus fuscis,* alis subcinereis latissimis, *venis nigricantibus,* oviductu elongato. Long. 2; alar. 4 lin.

Fem. Testaceous. Antennæ black, testaceous at the base, submoniliform, slightly verticillate-pilose; joints nearly round, hardly petiolated. *Thorax with three almost confluent brown stripes,* the middle one short. Wings slightly greyish, very broad and iridescent, slightly ciliated; *veins blackish;* subcostal vein about one-third of the length of the wing; cubital curved, ending on the hind border at some little distance from the tip of the wing; subapical straight, distinct along the whole length; subanal curved rather abruptly to the hind border. Oviduct attenuated, as long as the abdomen. Legs rather long and slender.

Rare. In the British Museum.

101. **articulata,** n. *Mas,* obscure testacea, *capite* antennisque *nigris,* his 26-articulatis corpore paullo longioribus, *thoracis disco fusco,* alis subcinereis, *venis pallide fuscis,* halteribus pedibusque pallide testaceis. Long. 1; alar. 3 lin.

Male. Dark testaceous. Head and antennæ black. *Antennæ* twenty-six-jointed, *moniliform,* thickly verticillate-pilose, a little longer than the body; joints alternately single and double, or short and long, the short joints rather longer than the petioles. Disc of the thorax brown. Wings slightly greyish; *veins pale brown;* subcostal vein much less than half the length of the wing; cubital very slightly curved, ending at some little distance from the tip of the wing; subanal very distinct; first branch of the anal slight, running very close to the subanal; second branch inclined very abruptly and hardly obliquely to the hind border, forming a nearly right angle. Halteres and legs pale testaceous, the latter long and slender.

Not common. (E.)

102. **mœsta,** n. *Mas,* testacea, *capite thoracisque disco fuscis,* antennis nigris corporis longitudine, *alis* subcinereis, *venis nigris,* pedibus pallide testaceis. Long. 1; alar. 3 lin.

Male. Testaceous. *Head and disc of the thorax brown. Antennæ* black, fourteen-jointed, *filiform,* very slightly verticillate-pilose, as long as the body; joints long, cylindrical, their petioles very short. *Wings* slightly greyish, pubescent, ciliated; *veins black,* subcostal vein rather less than half the length of the wing; cubital slightly curved, ending at some little distance behind the tip of the wing; subanal straight, very distinct; first branch of the anal faint, running almost close to the sub-

anal; second branch inclined abruptly to the border, straight, slightly oblique to the other part. Legs pale testaceous, rather long and slender.

Not common. (E.)

103. **Leacheana,** Steph. MSS. Testacea, capite antennisque nigris, thoracis disco fuscescente, alis subcinereis, venis nigris, *tarsis posticis apices versus albis; Mas*, antennis 16-articulatis corpore vix brevioribus, scutello thoracis lateribus abdominisque apice albidis, abdomine fusco; *Fœm.* antennis 14-articulatis corpore multo brevioribus, thoracis lateribus anticis albidis. Long. 2–2½; alar. 5–6 lin.

Testaceous. Head and antennæ black. Disc of the thorax brownish. Wings greyish, pubescent, ciliated; veins black; subcostal vein nearly half the length of the wing; cubital curved, ending near the tip of the wing; subanal distinct; first branch of the anal quite obsolete; second branch curved obliquely and not abruptly to the hind border. *Legs* long, slender; *hind tarsi white towards the tips. Male.* Antennæ sixteen-jointed, moniliform, verticillate-pilose, nearly as long as the body; joints nearly round, much shorter than their petioles, with whorls of very long hairs. Scutellum, sides of the thorax, and tip of the abdomen whitish. Abdomen brown. *Fem.* Antennæ fourteen-jointed, subfiliform, much shorter than the body; joints double, subcylindrical, verticillate-pilose, full four times the length of their petioles. Thorax whitish on each side in front. Oviduct short.

Not common. Found in the autumn, near London, and in the Forest of Dean, Gloucestershire. (E.)

104. **impudica,** Winn. Linn. Ent. viii. 262. 62 (1853). *Mas*, flava, antennis fuscis gracilibus basi flavis corpore duplo longioribus, articulis duplicatis longi-petiolatis, thorace vittis tribus fuscis, pectore fusco, alis subfuscescentibus cinereo-hirtis, venis fuscis, halteribus albis apice fuscescentibus, abdomine fuscescente cano-hirto, pedibus nigro-fuscis subtus albidis. Long. ⅔ lin.

Male. Yellow. Antennæ brown, slender, yellow at the base, twice the length of the body; double joints as long as their petioles, and towards the base of the antennæ rather longer. Thorax with three brown stripes. Pectus brown. Wings slightly brown; transverse veinlet situate at a little beyond the middle of the subcostal vein; anal vein and its second branch forming a rounded obtuse angle. Halteres white, with brownish tips. Abdomen brownish, with hoary hairs. Legs blackish-brown.

Habits unknown.

105. **tenuicornis,** n. *Mas*, fusco-testacea, capite nigro, *antennis corporis longitudine*, scutello pallide testaceo, *alis subcinereis*, halteribus albidis, *pedibus testaceis.* Long. 1; alar. 3 lin.

Male. Brownish-testaceous. Head black. *Antennæ* black, twelve-jointed, subfiliform, verticillate-pilose, *as long as the body;* joints double, nearly cylindrical, full thrice the length of their petioles. Scu-

tellum pale testaceous. *Wings slightly greyish;* veins brown; subcostal vein much less than half the length of the wing; cubital slightly curved, ending at some little distance from the tip of the wing, with a very oblique veinlet between it and the subcostal; subanal slight, but distinct; first branch of the anal distinct; second curved abruptly and slightly obliquely to the hind border. Halteres whitish. *Legs testaceous*, rather long.

Not common. (E.)

106. **xanthopyga,** Winn. Linn. Ent. viii. 263. 53 (1853). *Mas*, fusco-flava, *antennis* fuscis basi flavis *corpore plus duplo longioribus*, articulis longe petiolatis, thorace vittis tribus obscure fuscis, *alis subfuscescentibus* cinereo-pilosis, venis fuscis, halteribus pallidis, abdomine fuscescente, *pedibus fuscis* subtus albidis, femoribus basi coxisque flavis. Long. ½ lin.

Male. Brownish-yellow. Antennæ brown, yellow at the base, rather more than twice the length of the body; double joints as long as their petioles. Thorax with three dark drown stripes. Wings brownish, with dark grey pubescence; veins brown; transverse veinlet at some distance before the middle of the subcostal vein; anal vein and its second branch forming an obtuse angle. Halteres pale. Abdomen brownish. *Legs brown*, whitish beneath; femora at the base and coxæ yellow.

Habits unknown.

107. **agilis,** Winn. Linn. Ent. viii. 265. 57 (1853). *Mas*, fulva, antennis fuscis basi flavis corpore duplo longioribus, articulis longe petiolatis, *thorace vittis tribus parvis nigris*, alis limpidis cinereo-hirtis, venis pallide piceis, pedibus fuscis, femoribus basi pallidis. Long. ½ lin.

Male. Tawny. Antennæ brown, yellow at the base, twice the length of the body; double joints rather longer than their petioles. *Thorax with three slender black stripes.* Wings limpid, with pale brown veins, in some aspects brownish with white veins; transverse veinlet rather before the middle of the subcostal vein; second branch of the anal vein curved to the hind border.

Habits unknown.

108. **cingulata,** Winn. Linn. Ent. viii. 263. 54 (1853). *Fœm.* fulva, antennis nigro-fuscis basi flavis 15-articulatis, corpore vix brevioribus, *thorace vittis tribus contiguis nigris nitidis*, alis limpidis cinereo-pilosis, venis fuscis, halteribus albis, abdomine nigro-fasciato, oviductu brevissimo lamellis duabus rotundatis, pedibus pallide fuscis, femoribus basi flavescentibus. Long. ¾ lin.

Fem. Tawny. Antennæ fifteen-jointed, blackish-brown, yellow at the base, hardly shorter than the body; joints twice the length of their petioles. *Thorax with three contiguous black shining stripes.* Wings limpid, with dark grey pubescence; veins brown; transverse veinlet at some distance before the middle of the subcostal vein; second branch of the anal vein curved to the hind border. Halteres white. *Abdomen*

with black bands. Oviduct very short, with two rounded valves. Legs pale brown; femora yellowish at the base.

Habits unknown.

109. **limbata,** Winn. Linn. Ent. viii. 266. 58 (1853). *Fœm.* fulva, capite palpisque flavis, antennis fuscis corpore brevioribus, *thorace vittis tribus nigro-fuscis,* pectore nigro, *alis* limpidis *basi flavescentibus* dense nigro-pilosis margine nigro, abdomine nigro-fusco incisuris fulvis, oviductu brevi lamellis duabus ovatis, pedibus nigris, femoribus tibiisque subtus albis. Long. $\frac{4}{5}$ lin.

Fem. Tawny. Head and palpi yellow. Antennæ brown, two-thirds of the length of the body; joints five times the length of the petioles. *Thorax with three blackish-brown stripes.* Pectus black. *Wings* limpid, very pubescent, *yellowish at the base;* transverse veinlet joining the middle of the subcostal vein; anal vein and its second branch forming a slightly obtuse angle. Abdomen blackish-brown; sutures tawny. Oviduct short, with two oval valves. Legs black; femora and tibiæ white beneath.

Lives in rosettes or rose-like galls on *Salix amygdalina,* with *C. heterobia.*

110. **botularia,** Winn. Linn. Ent. viii. 266. 59 (1853). Fulva, proboscide albida, palpis fuscescentibus, antennis fuscis basi flavis, *thorace vittis tribus parvis pallide fuscis,* alis magnis limpidis cinereo-hirtis, venis pallide fuscis, abdominis incisuris fuscis, segmentorum marginibus posticis albo-hirtis, pedibus fuscescentibus subtus pallide flavescentibus; *Mas,* antennis corpore longioribus 26-articulatis; *Fœm.* antennis 14-articulatis corporis longitudine, oviductu brevi lamellis duabus longis ellipticis. Long. $\frac{2}{3}$–$\frac{3}{4}$ lin.

Tawny. Thorax with three brown stripes. Wings limpid; transverse veinlet joining the middle of the subcostal vein; anal vein and its second branch forming an almost right angle. *Male.* Antennæ twenty-six jointed, one-fourth longer than the body; double joints as long as their petioles. *Fem.* Antennæ fourteen-jointed, as long as the body; joints towards the tips longer by one-half than their petioles. Oviduct short, longer by one-half than their petioles.

Lives in elongated galls on the main ribs of the leaves of *Fraxinus excelsior;* changes to a pupa in the earth.

111. **Pini,** Deg. Ins. vi. 156. 28 (1778); Latr.; Meig.; Meq.; Ratz.; Winn.—*laterella,* Zett. Nigricans, antennis fuscis basi flavis, palpis fulvis, thoracis lateribus abdomineque rufo-fuscis, alis lacteis, venis anticis fuscis, pedibus fuscis subtus argentatis; *Mas,* antennis corpore longioribus, articulis duplicatis longi-petiolatis, halteribus albis; *Fœm.* antennis corporis dimidio paullo longioribus, oviductu brevi flavo lamellis duabus parvis ovatis. Long. 1–1$\frac{1}{2}$ lin.

Blackish. Abdomen and sides of the thorax reddish-brown. Wings milk-white; transverse veinlet somewhat beyond the middle of the

subcostal vein; anal vein and its second branch forming a rounded, slightly obtuse angle. *Male.* Antennæ somewhat longer than the body; double joints thrice the length of their petioles; whorls snow-white. *Fem.* Antennæ rather more than half the length of the body; joints about five times the length of their petioles. Oviduct short, yellow, with two small oval valves.

Lives on *Pinus sylvestris,* and assumes the pupa state in a white resinous cocoon on the leaves. (E.)

112. **linearis,** n. Pallide fusca, capite antennisque nigris, thoracis dorso fusco, lateribus pectoreque albidis, alis subcervinis, venis fuscis, halteribus albidis; *Mas,* antennis corpore brevioribus, pedibus albidis; *Fœm.* antennis corpore multo brevioribus, pedibus testaceis. Long. 1; alar. $2\frac{1}{2}$ lin.

Pale brown. Head and antennæ black. Thorax dark brown above; sides and pectus whitish. Wings very slightly fawn-colour; veins brown; subcostal vein much less than half the length of the wing; cubital very slightly curved, ending near the tip of the wing; subanal slight; first branch of the anal obsolete; second branch curved obliquely and not abruptly to the hind border. Halteres whitish. Legs slender, moderately long. *Male.* Antennæ sixteen-jointed?, slender, moniliform, slightly verticillate-pilose, shorter than the body; joints elliptical, a little longer than their petioles, which are testaceous. Legs whitish. *Fem.* Antennæ eleven-jointed, filiform, much shorter than the body; joints cylindrical, more than four times the length of their petioles. Legs testaceous.

Not common. (E.)

113. **digitata,** Winn. Linn. Ent. viii. 272. 64 (1853). Nigra, capite sordide flavo, proboscide palpisque fuscis, scutelli apice nonnunquam flavo, alis longis limpidis nigro-hirtis, venis fuscis, halteribus flavis, abdomine sordide flavo fasciis nigro-fuscis dorso dilatatis, pedibus piceis, tarsis pilosis; *Mas,* antennis corpore paullo longioribus, articulis longi-petiolatis; *Fœm.* antennis corpore multo brevioribus, oviductu corpore longiore lamellis nullis. Long. $\frac{2}{3}$–$\frac{3}{4}$ lin.

Black. Head dingy yellow. Wings limpid; transverse veinlet situate a little beyond the middle of the subcostal vein; second branch of the anal vein curved to the hind border. *Male.* Antennæ a little longer than the body; joints as long as their petioles. *Fem.* Antennæ much shorter than the body; joints about five times the length of their petioles. Oviduct longer than the body, without valves; first segment black, shining; second and third yellow.

Habits unknown.

114. **arcuata,** n. *Fœm. nigra,* antennis corpore brevioribus, *thoracis lateribus testaceis,* alis subcinereis, venis nigris, halteribus albidis, pedibus testaceis. Long. $1\frac{1}{4}$; alar. 4 lin.

Fem. Black. Antennæ twelve-jointed?, subfiliform, slightly verticillate-pilose, much shorter than the body; joints cylindrical, about four

times the length of their petioles. *Thorax testaceous on each side.* Wings slightly greyish, not ciliated; veins black; subcostal vein much less than half the length of the wing; cubital curved, ending near the tip of the wing; subanal distinct; first branch of the anal slight, running very near the subanal; second branch curved very abruptly and hardly obliquely to the hind border. Halteres whitish. Oviduct short. Legs dull testaceous, long, slender.

Not common. (E.)

115. **præcox,** Winn. Linn. Ent. viii. 276. 66 (1853). *Fœm. nigra,* palpis fuscis, antennis corpore brevioribus, articulorum petiolis brevissimis, thorace e pilis flavis bivittato, *scutello fusco-rufo,* alis subcinereis nigro-cinereo-pilosis, venis nigro-fuscis, halteribus pallide fuscis, abdomine nigro-fuscis incisuris albidis, oviductu longissimo lamellis duabus minimis, pedibus obscure fuscis. Long. $1\frac{1}{3}$ lin.

Fem. Black. Palpi brown. Antennæ shorter than the body; joints six times the length of their petioles. Thorax with two stripes of yellow hairs; *scutellum ferruginous.* Wings greyish; transverse veinlet situate at some distance before the middle of the subcostal vein; anal vein and its second branch forming an almost right angle. Oviduct very long, brownish-yellow, with two very small valves.

Appears in March in woods, especially on fresh-split oak stackwood.

116. **conformis,** n. *Fœm. nigro-fusca,* capite nigro, antennis nigris corpore brevioribus, *scutello thoracisque lateribus pallide testaceis,* alis subcinereis, venis nigris, halteribus albis, pedibus testaceis. Long. $1\frac{1}{2}$; alar. 4 lin.

Fem. Blackish-brown. Head black. Antennæ black, twelve-jointed?, verticillate-pilose, shorter than the body; joints subcylindrical, full thrice the length of their petioles. *Scutellum and sides of the thorax in front and at the base of the wings pale testaceous.* Wings greyish; veins black; subcostal vein less than half the length of the wing; cubital curved, ending at some little distance from the tip; subanal distinct; first branch of the anal slight, running almost close to the subanal; second branch inclined obliquely and rather abruptly to the hind border. Halteres white. Legs dull testaceous, long, rather slender.

Not common. (E.)

117. **tendens,** n. *Mas, pallide fusca, capite thoracisque disco nigro-fuscis,* antennis 24-articulatis corporis longitudine, alis subcinereis, venis nigricantibus, halteribus pedibusque albidis. Long. 2; alar. 6 lin.

Male. Pale brown, slender, linear. *Head, disc of the thorax, and metathorax blackish-brown.* Antennæ twenty-four-jointed, submoniliform, slightly verticillate-pilose, as long as the body; petiole of each joint as long as the incrassated elliptical part. Wings greyish, hardly ciliated; veins blackish; subcostal vein very little less than half the length of the wing; cubital slightly curved, ending on the hind border at a short distance from the tip; subapical apparent along the apical

half of the wing, running close to the first fork of the subanal, which is whitish and indistinct; second branch curved to the hind border very abruptly, and forming an almost right angle. Halteres and legs whitish, the latter long and slender.

Rare. In the British Museum. (E.)

118. **Tremulæ,** Winn. Linn. Ent. viii. 273. 65 (1853). *Nigro-fusca, capite thoracisque lateribus carneis,* alis amplis cinereis nigro-cinereo-pilosis, venis fuscis, *abdomine incisuris carneis* in immaturis toto carneo, pedibus subtus albo-nitentibus; *Mas,* antennis fuscis 26-articulatis corpore paullo longioribus, articulis duplicatis petiolatis; *Fœm.* antennis nigro-fuscis corpore multo brevioribus, articulorum petiolis brevissimis, abdomine carneo fasciis nigris, oviductu brevi lamellis nullis. Long. 1–1½ lin.

Blackish-brown. Head, sides of the thorax, and sutures of the abdomen flesh-colour. Wings grey; transverse veinlet situate a little before the middle of the subcostal vein; anal vein and its second branch forming a rounded nearly right angle. *Male.* Antennæ brown, twenty-six-jointed, a little longer than the body. *Fem.* Antennæ blackish-brown, much shorter than the body; joints about six times the length of their petioles. Abdomen flesh-colour, with black bands. Oviduct short; first segment tawny; second and third yellow, without valves.

Lives in galls of various forms on *Populus tremula;* changes to a pupa in the earth.

119. **dolosa,** n. *Fœm. nigra,* antennis corporis dimidio paullo longioribus, alis cinereis, venis nigris, abdomine piceo, oviductu brevi. Long. 1½; alar. 3 lin.

Black. Antennæ twelve-jointed?, moniliform, verticillate-pilose, rather more than half the length of the body; joints conical, single, with very short petioles. Wings grey, pubescent, ciliated; veins black; subcostal vein much more than half the length of the wing; cubital nearly straight, ending at very little behind the tip of the wing, with a very oblique veinlet between it and the cubital; subanal distinct, straight; first branch of the anal very indistinct, running at some distance from the subanal; second branch curved very abruptly to the hind border. Abdomen dark piceous. Oviduct short. Legs moderately long, rather slender.

Rare. In the British Museum. (E.)

120. **notabilis,** n. *Mas, fusca,* capite antennisque nigris, his corporis longitudine, *scutello pectore thoracisque vittis duabus testaceis,* alis cinereis, venis nigris, halteribus ventre pedibusque testaceis. Long. 1¼; alar. 3 lin.

Male. Brown. Head black. Antennæ black, twenty-jointed, moniliform, verticillate-pilose, as long as the body; joints short, alternately single and double, rather longer than their petioles. *Thorax with two pale testaceous stripes. Scutellum and pectus testaceous.* Wings

grey, pubescent, ciliated; veins black; subcostal vein much less than half the length of the wing; cubital slightly curved, ending near the tip; subanal distinct; first branch of the anal inclined abruptly to the subanal, and not distinguishable beyond; second branch inclined very abruptly to the hind border, and forming an almost right angle. Halteres, abdomen beneath, and legs, pale testaceous. Legs slender, rather long.

Not common. (E.)

121. **verna,** Curt.! B. E. 178 (1827). *Mas? fusca,* capite antennisque nigris, his corpore vix brevioribus, *thoracis lateribus scutello abdominisque basi albidis,* alis cinereis, venis nigris, halteribus albidis, pedibus pallide fuscis. Long. $1\frac{1}{2}$; alar. 4 lin.

Male? Brown. Head and antennæ black. Antennæ slender, verticillate-pilose, nearly as long as the body; joints long, cylindrical, double, with petioles rather less than half their length. *Scutellum, sides of the thorax, and abdomen at the base whitish.* Wings grey, minutely pubescent; veins black; subcostal vein much less than half the length of the wing; cubital curved towards its tip, ending on the hind border at some distance from the tip of the wing; subanal distinct, almost straight; first branch of the anal slight, but distinct, running very near to the subanal; second branch curved abruptly and hardly obliquely to the hind border. Halteres whitish. Abdomen pubescent. Legs pale brown, slender, rather long.

Not common. (E.)

122. **centralis,** Winn. Linn. Ent. viii. 277. 67 (1853).—*annulipes?* Meig.; Hal. *Fœm.* fulva, antennis fuscis corporis dimidio paullo longioribus, articulorum petiolis brevissimis, thorace vittis tribus castaneo-fuscis, pectore nigricante, *alis limpidis fusco-trifasciatis,* venis fuscis, halteribus albis, oviductu abdominis longitudine, pedibus albidis nigro-fasciatis. Long. $\frac{2}{3}$ lin.

Fem. Tawny. Antennæ brown, a little more than half the length of the body; joints six times the length of their petioles. Thorax with three chestnut-brown stripes. Pectus blackish. *Wings limpid, with three brown bands;* veins brown; transverse veinlet situate before the middle of the subcostal vein; anal vein and its second branch forming an almost right angle. Halteres white. Oviduct as long as the abdomen, with two somewhat rounded valves. Legs whitish, with black bands.

Rare. (E.) *C. annulipes* inhabits beech-trees.

123. **Ceomatis,** Winn. Linn. Ent. viii. 278. 68 (1853). Flava, antennis fuscescentibus basi flavis, thorace vittis tribus fuscis, *alis albis fusco quadrimaculatis,* halteribus albis, pedibus pallide fuscis subtus flavis; *Mas,* antennis corpore longioribus, articulis duplicatis longipetiolatis; *Fœm.* antennis corpore paullo brevioribus, articulis vix petiolatis, oviductu brevi lamellis duabus ovatis. Long. $\frac{1}{2}$ lin.

Yellow. Antennæ brownish. Thorax with three brown bands. *Wings*

white, with four brown spots; transverse veinlet at a little beyond the middle of the subcostal vein; anal vein and its second branch forming an almost right angle. Halteres white. Legs pale brown, yellow beneath. *Male.* Antennæ longer by half than the body; double joints very little shorter than their petioles. *Fem.* Antennæ five-sixths of the length of the body; joints almost sessile. Oviduct with two oval valves.

Feeds on *Ceoma miniatum,* growing on the fallen leaves of the rose; changes in the earth.

124. **Cerasi,** Loew, Pr. Pos. Gymn. 35. 19 (1850); Winn. Fulva, capite thoracisque disco nigro-fuscis aut castaneo-fuscis, antennis fuscis basi flavis, pectore nigro, *alis subcinereis* valde pilosis, venis fuscis, halteribus albo-flavis apice fuscis, abdomine sordide fusco-flavo incisuris nigricantibus, pedibus nigro-fuscis subtus albo-nitentibus, femoribus basi tarsisque posticis pallide flavis; *Mas,* antennis corpore fere duplo longioribus, articulis duplicatis longi-petiolatis; *Fœm.* antennis corpore brevioribus, articulorum petiolis brevissimis, oviductu brevi lamellis duabus ovatis. Long. $\frac{3}{4}$–1 lin.

Tawny. Disc of the thorax brown. *Wings greyish;* transverse veinlet joining the middle of the subcostal vein; anal vein and its second branch forming an almost right angle. Legs blackish-brown; femora at the base and hind tarsi pale yellow. *Male.* Antennæ nearly twice the length of the body; double joints rather shorter than their petioles. *Fem.* Antennæ about two-thirds of the length of the body; joints five times the length of their petioles. Oviduct short, with two oval valves.

Feeds on the leaves of the Cherry, of the White-thorn, and of *Chenopodium.*

125. **cilipes,** Winn. Linn. Ent. viii. 280. 70 (1853). Fulva, antennis fuscis basi flavis, thorace vittis tribus contiguis nigro-fuscis, pectore nigricante, *alis fuscescentibus* nigro-cinereo-pilosis, venis nigris, halteribus fuscis basi albo-flavis, abdomine fusco-flavo albo-hirto, *pedibus pilosis nigris longissimis subtus albidis, tarsorum articulis tertio ad quintum albicantibus; Mas,* antennis corpore multo longioribus, articulis duplicatis longi-petiolatis; *Fœm.* antennis corpore brevioribus, articulorum petiolis brevissimis, oviductu brevi lamellis duabus ovatis. Long. 1 lin.

Tawny. Thorax with three blackish-brown stripes. *Wings brownish;* transverse veinlet joining the middle of the subcostal vein; anal vein and its second branch forming a rounded obtuse angle. *Legs hairy, very long, black, whitish beneath; third, fourth, and fifth joints of the tarsi whitish. Male.* Antennæ longer by half than the body; double joints rather shorter than their petioles. *Fem.* Antennæ about two-thirds of the length of the body; joints six times the length of their petioles. Oviduct short, with two oval valves.

Lives in decayed wood of *Fagus sylvatica.*

126. **decorata,** Winn. Linn. Ent. viii. 281. 71 (1853). Fulva,

capite flavo, antennis fuscis basi flavis, thorace vittis tribus nigris contiguis, pectore nigricante maculis lateralibus nigro-cinereis, *alis fuscescentibus* nigro-cinereo pilosis, venis nigris, halteribus fuscescentibus basi flavescentibus, abdomine fusco-flavo cinereo-hirtissimo, *pedibus nigro-fasciatis; Mas*, antennis corpore multo longioribus, articulis duplicatis longi-petiolatis; *Fœm.* antennis corpore brevioribus, articulorum petiolis brevissimis, oviductu brevi lamellis duabus ovatis. Long. 1¼ lin.

Tawny. Thorax with three black stripes. *Wings brownish;* transverse veinlet situate a little beyond the middle of the subcostal vein; anal vein and its second branch forming a rounded obtuse angle. Legs with black bands. *Male.* Antennæ longer by one-third than the body, like those of *C. Cerasi*, but with shorter hairs on the upper side. *Fem.* Antennæ rather more than half the length of the body; joints five times the length of their petioles. Oviduct short, with two oval valves.

Lives in decayed beech-wood.

The following species also belong to the Subgenus *Diplosis*:—
C. Anthemidis, *Loew.* In the flowers of *Anthemis arvensis.*
C. guttata, *Loew.*
C. pavonia, *Loew.*
C. tenuis, *Loew.*
C. Jacobææ, *Loew.* In the flowers of *Senecio Jacobæa.*
C. unicolor, *Loew.*
C. simplex, *Loew.*
C. Inulæ, *Loew.* Lives in galls on *Inula Britannica.*
C. brachyntera, *Schwægr.*

127. **Sarothamni,** Loew, Pr. Pos. Gymn. 38. 48 (1850); Winn. *Nigro-cinerea, capite, pectore antico, alis basi, metathorace scutelloque fulvis*, antennis nigro-fuscis, *alis fuscescentibus* nigro-cinereo-hirtis, venis nigro-fuscis, halteribus fulvis, capitulis subtus ex parte fuscis, abdomine fusco subtus albo-hirto, pedibus piceis aut nigro-fuscis, femoribus sæpissime pallidioribus; *Mas*, antennis 15-articulatis corporis longitudine; *Fœm.* antennis 14-articulatis corporis dimidio non longioribus, oviductu longissimo valde acuminato lamellis nullis. Long. 2–2¼ lin.

Blackish-grey. Head, pectus in front, wings at the base, metathorax, and scutellum tawny. Wings brownish; transverse veinlet situate at about one-fourth of the length of the subcostal vein; second branch of the anal vein curved to the hind border. *Male.* Antennæ fifteen-jointed, as long as the body. *Fem.* Antennæ fourteen-jointed, about half the length of the body. Oviduct very long, brownish-yellow, much acuminated, without valves.

Lives in bud-like galls on the twigs of *Sarothamnus scoparius.*

128. **innotata,** n. *Mas, fusca*, capite antennis thoracisque disco nigris, antennis corpore brevioribus, *thorace postico testaceo, alis obscure cinereis* albo-subnebulosis, venis nigris, abdominis lateribus albido-vittatis, pedibus validis. Long. 2; alar. 4 lin.

Male. Brown. Head, antennæ, and disc of the thorax black. Antennæ filiform, shorter than the body; joints long, cylindrical, not petiolated. *Hind part of the thorax dull testaceous. Wings dark grey,* pubescent, indistinctly mottled with white, ciliated on the hind border; veins black; subcostal vein ending at rather less than half the length of the wing; cubital straight, ending at very little behind the tip of the wing; subapical distinct, straight, running parallel and extremely near to the first fork of the subanal; hind fork of the subanal straight, inclined abruptly to the hind border, forming an acute angle with the first branch, which is slight. Abdomen pubescent, with a whitish streak along each side. Legs stout, moderately long.

Rare. In the British Museum. (E.)

129. **plena,** n. *Mas, nigra,* cinereo-pubescens, antennis filiformibus, *alis cinereis* pubescentibus, venis nigris, halteribus albidis, pedibus robustis. Long. $1\frac{1}{4}$; alar. 3 lin.

Male. Black, with grey down. Antennæ filiform; joints cylindrical, elongated, not petiolated. *Wings grey,* wholly downy; veins black; cubital vein ending very little behind the tip of the wing; subapical vein indicated along nearly its own length by a slight streak; second branch of the subanal vein almost straight, passing abruptly to the border, forming a slightly obtuse angle with the fore branch. Halteres dingy whitish. Legs stout, not long.

Rare. In the British Museum. (E.)

130. **Æthiops,** n. *Mas, nigra,* antennis pilosis corpore paullo brevioribus, thoracis lateribus abdomineque cano-pilosis, *alis nigro-cinereis* pubescentibus *subnebulosis,* venis nigris, pedibus validis. Long. 2; alar. 5 lin.

Male. Black. Abdomen and sides of the thorax with hoary hairs. Antennæ fourteen-jointed, filiform, pilose, a little shorter than the body; joints long, cylindrical, not petiolated; three or four terminal joints short. *Wings blackish-grey,* broad, ciliated, very pubescent, *indistinctly mottled with paler colour;* veins black; subcostal vein ending at before half the length of the wing; cubital almost straight, ending at a little behind the tip; subanal distinct, nearly straight; first branch of the anal distinct, running near and almost parallel to the subanal; second branch curved obliquely and not abruptly to the hind border. Legs stout, pubescent, moderately long.

Rare. (E.)

131. **albonotata,** n. *Mas, fusca,* capite antennisque nigris, his corpore vix brevioribus, *scutello thoracisque lateribus albidis, alis cinereis,* venis nigris, halteribus albis, *pedibus pallide fuscis.* Long. $1\frac{1}{2}$–2; alar. 4–5 lin.

Male. Brown. Head and antennæ black. Antennæ twelve-jointed?, pubescent, filiform, nearly as long as the body; joints long, cylindrical, not petiolated. *Scutellum and sides of the thorax whitish. Wings grey,* pubescent, rather opaque, slightly ciliated; veins black; subcostal vein

a little less than half the length of the wing; cubital nearly straight, ending at a little behind the tip of the wing; subanal distinct, nearly straight; first branch of the anal slight, running almost close to the subanal; second curved obliquely but abruptly to the hind border. Halteres white. *Legs pale brown*, with a whitish tinge, rather stout, moderately long.

Not common. (E.)

132. **crassicornis,** n. *Obscure fusca, scutello albido, alis subcinereis*, halteribus albidis, *pedibus pallide testaceis; Mas*, antennis corpore paullo longioribus. Long. $\frac{3}{4}$; alar. 2 lin.

Dark brown. Scutellum whitish. Wings very slightly greyish; veins brown; subcostal vein a little less than half the length of the wing; cubital straight, ending at the tip of the wing; subanal nearly straight, distinct except near the base of the wing; first branch of the anal obsolete; second curved abruptly and slightly obliquely to the hind border. Halteres whitish. *Legs pale testaceous*, rather stout, moderately long. *Male.* Antennæ twelve-jointed?, filiform, stout, minutely pubescent, rather longer than the body; joints long, cylindrical, not petiolated.

Rare. (E.)

The following species also belong to the Subgen. *Asphondylia* :—

C. Ribesii, *Meig.* On *Ribes rubrum?*

C. Genistæ, *Loew.* In green galls on *Genista Germanica.*

C. Echii, *Loew.* In knobs on *Echium vulgare.*

133. **fasciata,** Meig. Zw. i. 94. 2 (1818); Winn. *Fœm. fusca, antennis* 14-*articulatis*, thorace fusco-flavo, vittis tribus nigro-fuscis, pectore nigricante, alis pallide cinereis, halteribus abdomineque albidis, hoc nigro-fasciato. Long. 3 lin.

Fem. Brown. Antennæ fourteen-jointed. Thorax brownish-yellow, with three blackish-brown stripes, and with a black spot on each side behind. Pectus blackish. Wings pale grey. Halteres yellowish-white. Abdomen yellowish-white, with a black shining band on the hind border of each segment, from the first to the seventh.

Meigen supposes that his *C. grandis* may be the male of *C. fasciata*, but does not mention whether the two are alike in the structure of the thorax. Winnertz describes a male, and observes that his, and the two following descriptions of males,—*Cecidomyia fasciata*, Bremi, Neue Denkschr. Schw. Gesell. 60 (1847), and *Cecidomyia fasciata*, Loew, Prog. Gymn. Pos. 31 (1850),—comprise three distinct species. Rondani's genus *Ozirhincus* seems to be nearly allied to this and to the following species.

134. **extrema,** Walk. E. M. iii. 179 (1835).—*cucullata*, Meig., var.? *Fœm. testacea, antennis* nigricantibus 25-*articulatis* corporis dimidio brevioribus, thorace vittis tribus fulvis, alis cinereis, pedibus fuscis, pedibus robustis, tarsis incurvatis. Long. 2–$2\frac{1}{2}$; alar. $3\frac{1}{2}$–4 lin.

Fem. Testaceous. Antennæ blackish, submoniliform, pilose, *with*

about twenty-five joints, less than half the length of the body; joints approximate, nearly oval, not petiolated. Thorax advanced over the head, with three tawny stripes. Wings grey, rather short and narrow; veins darker, as in *C. ampla*. Abdomen brown. Legs brown, stout; tarsi curved. Var. β. Abdomen tawny.

Not common. In the British Museum. (E. S.)

The following species seem to be nearly allied to *C. extrema*:—

C. producta, *Meig*. C. rosea, *Zett*. C. protuberans, *Zett*. C. hirtipes, *Zett*. C. immunda, *Zett*.

135. **funesta,** n. *Mas, nigra*, thorace obscure ferrugineo vittis tribus nigris, alis cinereis, venis nigris, pedibus validis longis. Long. 2; alar. 4 lin.

Male. Black. Antennæ submoniliform; joints a little longer than broad. Thorax dark ferruginous, with three black stripes. Wings grey; veins black; subcostal vein much more than half the length of the wing; cubital very slightly curved, ending on the hind border at some little distance from the tip; subapical indicated by a streak; second branch of the subanal curved abruptly to the border, forming a very acute angle with the first, which is very indistinct. Legs long, stout.

Rare. In the British Museum. (E.) This may be the male of *C. extrema*.

136. **ampla,** n. *Testacea, antennis* fuscis 25-*articulatis* corporis dimidio fere longioribus, thorace vittis tribus fuscis, alis subcinereis, abdomine univittato, pedibus longis. Long. 3; alar. 7 lin.

Testaceous. Antennæ brown, *with about twenty-five joints;* joints nearly oval. Thorax with three tawny stripes. Wings very slightly greyish; veins pale; subcostal vein ending at half the length of the wing; cubital ending at the tip; subapical ending at about half the distance from the cubital and the subanal, the latter abruptly curved to the border towards its tip. Abdomen with a slight darker dorsal stripe. Legs long, rather slender. *Male.* Antennæ moniliform, verticillate-pilose, a little shorter than the body; joints petiolated. Abdomen brownish; hind borders of the segments pale testaceous. *Fem.* Antennæ submoniliform, full half the length of the body, slightly verticillate-pilose; joints approximate, hardly petiolated. Abdomen with a slight dark tawny dorsal stripe.

Rare. (E.)

137. **crassipes,** Loew, Pr. Pos. Gym. iv. 31. 2. *Fœm. fulva, antennis* fuscis 16-*articulatis* verticillato-pilosis, thorace fusco-trifasciato, alis subcinereis, halteribus pedibusque nigro-fuscis, his crassis. Long. 2 lin.

Fem. Tawny. Antennæ brown, *sixteen-jointed*, verticillate-pilose; the last joint small, often not distinct. Thorax with three indistinct darker stripes. Wings greyish; their pubescence brown along the fore

border, paler along the hind border. Halteres blackish-brown. Abdomen reddish. Oviduct not exserted. Legs blackish-brown, stout.

The oviduct is retracted in the preceding species of this subgenus; in *C. cornuta,* Bremi, it is extended.

138. **Fagi,** Hartig, Jahresberichte i. 4 (1836); Loew; Winn. *Nigro-fusca,* capite nigro, *thorace trisulcato lateribus carneis, alis sublimpidis* cinereo-pilosis, venis pallide fuscis, costa nigro-fusca, halteribus fulvis, *abdomine obscure carneo,* femoribus basi flavescentibus; *Mas,* antennis 24-articulatis corpore longioribus, articulis longi-petiolatis; *Fœm.* antennis articulis 20–22 non petiolatis, oviductu fulvo brevi lamellis duabus rotundatis. Long. 2–2½ lin.

Blackish-brown. Head black. *Thorax with three furrows, flesh-colour on each side. Wings nearly limpid;* anal vein and its second branches forming a slightly obtuse angle. *Abdomen dull flesh-colour.* Femora yellowish at the base. *Male.* Antennæ twenty-four-jointed, longer by one-fourth than the body; joints as long as their petioles. *Fem.* Antennæ twenty- to twenty-two-jointed, one-third of the length of the body; joints not petiolated. Oviduct tawny, short, with two round valves.

Lives in the pyramidal galls on the leaves of *Fagus sylvatica.* These occur in great numbers on the beech-trees near Interlacken, in Switzerland, and are different from the slender horn-shaped galls which appear on the beech-leaves near London. (E.?)

139. **piligera,** Loew, Pr. Pos. Gymn. 32. 6 (1850); Winn.—*annulipes,* Hartig. *Nigro-fusca,* palpis pallide fuscescentibus, antennis 17–20-articulatis fuscescentibus, *thoracis lateribus abdomineque carneis, alis limpidis* cinereo-hirtis, venis fuscescentibus, costa nigro-fusca, halteribus basi flavis, pedibus subtus albicantibus; *Mas,* antennis corpore paullo longioribus, articulis brevi-petiolatis; *Fœm.* antennis corporis dimidio non longioribus, articulis non petiolatis, oviductu elongato flavo lamellis nullis. Long. 1¼–1½ lin.

Blackish-brown. Antennæ with eighteen or twenty joints, rarely with seventeen joints. *Thorax on each side and abdomen flesh-colour. Wings limpid;* anal vein and its second branch forming a slightly obtuse angle. *Male.* Antennæ a little longer than the body; joints longer by one-third than their petioles. *Fem.* Antennæ as long as the head and the thorax together; joints not petiolated. Oviduct elongated, yellow, without valves.

Lives in hairy galls on the leaves of *Fagus sylvatica.*

140. **elegans,** Winn. Linn. Ent. viii. 287. 76 (1853). *Mas, nigra, nitida,* antennis 20-articulatis fuscis corpore paullo brevioribus, articulis longi-petiolatis, *thoracis lateribus carneis, alis subcinereis* cinereo-pilosis, venis fuscis, halteribus basi albis, *abdomine nigro-fusco incisuris albis,* pedibus subtus vix albicantibus. Long. 1¼ lin.

Male. Black, shining. Antennæ twenty-jointed, brown, shorter by

one-fourth than the body; joints hardly longer than their petioles. *Thorax flesh-colour on each side. Wings slightly grey;* transverse veinlet joining the middle of the subcostal vein. Halteres blackish-brown, white at the base. *Abdomen blackish-brown, with white sutures and a white dorsal line, along which on the fore borders of the segments from the third to the seventh are white dots.* Legs blackish-brown, somewhat whitish beneath.

Habits unknown.

141. **bipunctata,** Winn. Linn. Ent. viii. 288. 77 (1853). *Mas, nigro-fusca,* antennis 17–18-articulatis fuscis corpore paullo brevioribus, articulis cylindricis petiolatis, thorace flavo-hirto, *alis subcinereis* cinereo-hirtis, venis fuscis, halteribus fuscis basi flavis, *abdominis incisuris fulvis,* pedibus fuscis. Long. 1–1$\frac{1}{6}$ lin.

Male. Blackish-brown. Antennæ seventeen- to eighteen-jointed, brown, shorter by one-fourth than the body; joints cylindrical, longer by one-fourth than their petioles. Thorax with yellow hairs. *Wings slightly grey,* with grey pubescence; veins brown; transverse veinlet situate a little beyond the middle of the subcostal vein; anal vein and its second branch forming an almost right angle. *Abdomen with tawny sutures and a tawny dorsal stripe; seventh and eight segments tawny, each with two lateral blackish-brown spots.* Legs brown.

Lives in hairy galls on the leaves of *Fagus sylvatica.*

142. **floricola,** Winn. Linn. Ent. viii. 289. 78 (1853). *Mas, nigra,* nigro-hirta, antennis fuscescentibus 18-articulatis albo verticillato-pilosis, *thoracis lateribus carneis, alis* amplis *albidis* cano-pilosis, venis fuscis, pedibus obscure fuscis; *Mas,* antennis corpore paullo brevioribus, articulorum petiolis sat longis, *abdomine sordide flavo-fusco,* pedibus subtus argentatis; *Fœm.* antennis corporis dimidio æqualibus, articulorum petiolis brevissimis, *abdomine carneo,* oviductu elongato lamellis nullis, pedibus subtus albidis. Long. 1 lin.

Black. Antennæ brownish. *Thorax flesh-colour on each side. Wings* broad, *whitish;* transverse veinlet at two-thirds of the length of the subcostal vein; anal vein and its second branch forming an obtuse angle. *Male.* Antennæ rather shorter than the body; joints twice the length of their petioles. *Abdomen dingy yellowish-brown.* Legs silvery beneath. *Fem.* Antennæ half the length of the body; joints about six times the length of their petioles. *Abdomen flesh-colour.* Oviduct elongated, without valves. Legs whitish beneath.

Lives in the flowers of *Achillea Ptarmica.*

143. **lentipes,** Winn. Linn. Ent. viii. 291. 79 (1853). *Fœm. flava,* antennis fuscescentibus 15-articulatis corpore brevioribus basi flavis, articulis longi-petiolatis, *alis pallide subflavescentibus* cinereo-hirtis, venis flavescentibus, oviductu brevi lamellis duabus parvis rotundatis. Long. $\frac{1}{2}$ lin.

Fem. Yellow. Antennæ fifteen-jointed, brownish, somewhat shorter

than the body, yellow at the base; joints a little longer than their petioles. *Wings slightly æneous-yellow, in some aspects almost lacteous,* with grey pubescence; veins yellowish; transverse veinlet joining the middle of the subcostal vein; anal vein and its second branch forming a slightly obtuse angle. Oviduct short, retracted, with two small somewhat rounded valves.

Lives in decayed wood.

144. **Capreæ,** Winn. Linn. Ent. viii. 291. 80 (1853). *Fulva, facie nigricante,* palpis albis, antennis 14-articulatis fuscis cano-verticillato-pilosis, *thorace fasciis tribus latis nigris, alis* amplis *albidis,* costa nigro-cinerea, abdomine obscuro, pedibus nigro-fuscis, femoribus basi albido-flavis; *Mas,* antennis corpore brevioribus, articulis longi-petiolatis; *Fem.* antennis corporis dimidio fere brevioribus, articulis non petiolatis, pectore nigricante, oviductu mediocriter longo lamellis nullis. Long. $\frac{3}{4}$–1 lin.

Tawny. Face blackish. Palpi white. Antennæ fourteen-jointed, brown. *Thorax with three broad black stripes. Wings whitish;* transverse veinlet joining the middle of the subcostal vein; second branch of the anal vein curved to the hind border. Legs blackish-brown; femora whitish-yellow at the base. *Male.* Antennæ shorter by one-third than the body; joints as long as their petioles. *Fem.* Antennæ hardly half the length of the body; joints sessile. Pectus blackish. Oviduct of moderate length, without valves; first and second segments thick.

Lives in pustule-shaped galls on the leaves of *Salix Caprea* and *S. aurita;* is transformed into the pupa beneath the leaves. It is probably the same as *C. Capreæ,* Hardy, Scot. Gard. iii. 45 (1854), reared from rosettes of *Salix Caprea.*

145. **graminicola,** Kaltenbach, MSS.; Winn. Linn. Ent. viii. 292. 81 (1853). *Albo-flava,* antennis fuscis basi flavis cano-verticillato-pilosis, *thoracis disco pectore et metathorace nigro-fuscis, alis* amplis *limpidis* nigro-cinereo-pilosis, venis fuscis, costa nigro-fusca, pedibus fuscis subtus flavidis; *Mas,* antennis 19–20-articulatis corpore brevioribus, articulis mediocriter petiolatis, abdomine nigro-fusco incisuris albo-flavis; *Fœm.* antennis 19-articulatis corporis dimidio æqualibus, articulorum petiolis brevioribus, abdomine fulvo longissimo fasciis latis fuscis, oviductu brevi albo-flavo lamellis nullis. Long. 1–1$\frac{1}{4}$ lin.

Whitish-yellow. Disc of the thorax, pectus, and metathorax blackish-brown. Wings limpid; transverse veinlet at a little beyond the middle of the subcostal vein; anal vein and its second branch forming an almost right angle. Legs brown. *Male.* Antennæ nineteen to twenty-jointed, shorter by one-third than the body; joints about twice the length of their petioles. *Abdomen blackish-brown, with whitish-yellow sutures. Fem.* Antennæ nineteen-jointed, half the length of the body; joints about four times the length of their petioles. *Abdomen tawny, with broad brown bands on the hind borders of the segments.* Oviduct short, whitish-yellow; tip broad, without valves.

Lives on *Poa nemoralis,* and forms oval, rough galls, in which it assumes the winged state.

C. amœna, Loew, and *C. gibba,* Zett., also belong to the Subgenus *Hormomyia.*

146. **angustipennis,** Winn. Linn. Ent. viii. 293. 82 (1853). *Fœm.* flava, antennis fuscis basi flavis 13-articulatis corporis longitudine, articulis mediocriter petiolatis, thorace vittis tribus fuscis, alis longissimis angustis subfuscescentibus, venis fuscis, oviductu brevi lamellis duabus longi-ovatis, pedibus fuscis longissimis. Long. $\frac{1}{2}$ lin.

Fem. Yellow. Antennæ thirteen-jointed, brown, yellow at the base; joints about twice the length of their petioles. Thorax with three brown stripes. Wings brownish, narrow, very long; veins brown; transverse veinlet at three-fourths of the length of the subcostal vein. Halteres yellow, with brown knobs. Oviduct short, with two elongated oval valves. Legs brown, very long; second joint of the tarsi much longer than the tibiæ.

Lives in decayed beech-wood.

Note. Loew's subgenus *Dirhiza* contains only one species, *D. lateritia,* Loew.

147. **defecta,** Loew, Pr. Pos. Gymn. 38. 57 (1850); Winn. *Pallide flava,* alis longis angustis fere limpidis, venis pallide fuscescentibus, halteribus albis, pedibus pallide fuscescentibus, tarsis apice albidis; *Mas,* antennis 15-articulatis pallide fuscis corpore duplo longioribus basi petiolisque albo-flavis, his longissimis; *Fœm.* antennis 13-articulatis fuscis basi flavis corpore vix brevioribus, petiolis brevioribus, oviductu sat longo lamellis nullis. Long. fere 1 lin.

Pale yellow. Wings nearly limpid. Halteres white. Legs pale brown; fourth and fifth joints of the tarsi whitish. *Male.* Antennæ fifteen-jointed, pale brown, twice the length of the body; joints half the length of their petioles, which are whitish-yellow. *Fem.* Antennæ thirteen-jointed, brown, yellow at the base, almost as long as the body; joints twice the length of their petioles. Oviduct moderately long, generally retracted, without valves.

Lives in decayed beech-wood.

148. **gracilis,** Winn. Linn. Ent. viii. 298. 89 (1853). *Flava,* antennis fuscis basi flavis, *thorace vittis tribus nigro-fuscis,* alis sublimpidis, venis fuscis, halteribus pallide fuscis basi albis, *abdomine flavescente fusco incisuris pallidioribus,* pedibus fuscescentibus aut nigro-fuscis, tarsis apice niveis; *Mas,* antennis 16-articulatis corpore longioribus, articulorum petiolis longissimis; *Fœm.* antennis 13-articulatis corpore brevioribus, petiolis abbreviatis, abdomine toto flavo, oviductu brevi lamellis duabus ovatis. Long. 1 lin.

Yellow. Antennæ brown. *Thorax with three blackish-brown stripes.* Wings nearly limpid; anal vein and its second branch forming an almost right angle. *Abdomen yellowish-brown, with pale sutures.* Legs

brownish or blackish-brown; third, fourth, and fifth joints of the tarsi snow-white. *Male.* Antennæ sixteen-jointed, longer by half than the body; joints half the length of their petioles. *Fem.* Antennæ thirteen-jointed, shorter by one-third than the body; joints three times the length of their petioles. Oviduct short, retracted, with two oval valves.

Lives on decayed wood.

149. **valvata,** Winn. Linn. Ent. viii. 302. 94 (1853). *Fœm. flava,* antennis 24-articulatis pallide fuscis basi flavis corpore brevioribus, articulorum petiolis abbreviatis, palpis albidis longissimis, *thorace vittis tribus castaneo-fuscis,* alis sublimpidis cinereo-hirtis, venis fuscescentibus, *oviductu* crasso, *valvulis duabus apicalibus nigris,* lamellisque duabus parvis rotundis, pedibus longissimis piceis, tarsis apice niveis. Long. 1 lin.

Fem. Yellow. Antennæ twenty-four-jointed, pale brown, yellow at the base, shorter by one-third than the body; some of the joints about thrice the length of their petioles; five or six apical joints without petioles. Palpi whitish, very long. Thorax with three chestnut-brown stripes. Wings nearly limpid, with grey pubescence; veins brownish; anal vein and its second branch forming an almost right angle. Abdomen clothed with hoary hairs. *Oviduct* long, stout, yellow, *with two black apical valves, between which is the aperture of the oviduct,* and two very small round valves. Legs piceous, very long, whitish beneath; third, fourth, and fifth joints of the tarsi snow-white.

Found on the decayed stems of *Carpinus Betula.*

150. **nodicornis,** Winn. Linn. Ent. viii. 300. 92 (1853). *Flava,* antennis fuscis basi flavis, *thorace vittis tribus nigro-fuscis,* pectore nigricante, alis subcinereis cinereo-pilosis, venis fuscis; *Mas,* antennis 21-articulatis corpore longioribus, articulorum petiolis elongatis, halteribus albis, pedibus pallide fuscescentibus, femoribus basi flavis, tarsis apice niveis; *Fœm. antennis* 26-*articulatis* corpore brevioribus, petiolis brevissimis, oviductu elongato lamellis duabus parvis longi-ovatis, pedibus nigro-fuscis, femoribus basi subtusque flavescentibus, tarsis apice niveis. Long. 1–1½ lin.

Yellow. Antennæ brown. *Thorax with three blackish-brown stripes.* Pectus blackish. Wings greyish; transverse veinlet situate at a little before two-thirds of the length of the subcostal vein; anal vein and its second branch forming a rounded, slightly obtuse angle. *Male.* Antennæ twenty-one-jointed, longer by nearly half than the body; joints and petioles of almost equal length towards the base, the latter longer in the middle, but much shorter in the apical part of the antennæ. *Fem. Antennæ twenty-six-jointed,* shorter by one-third than the body; joints about four or five times the length of the petioles. Oviduct elongated, with two very small elongate-oval valves.

Lives on decayed beech-wood.

151. **nemoralis,** Winn. Linn. Ent. viii. 302. 93 (1853). *Fœm.*

fulva, antennis 22-*articulatis* corporis dimidio paullo longioribus, articulorum petiolis elongatis, *thorace vittis tribus abbreviatis fere contiguis nigro-fuscis, pectore maculis duabus nigricantibus,* alis subcincreis cinereo-hirtis, venis fuscis, halteribus flavis, capitulis castaneo-fuscis, *abdomine flavo incisuris nigricantibus,* oviductu elongato lamellis duabus longi-ovatis, pedibus fuscis, femoribus basi flavis, tarsis posticis niveis. Long. $1\frac{1}{4}$ lin.

Fem. Tawny. Antennæ twenty-two-jointed, rather more than half the length of the body; most of the joints rather shorter than their petioles. *Thorax with three almost confluent abbreviated blackish-brown stripes. Pectus with two blackish spots.* Wings greyish, with grey pubescence; veins brown. Halteres yellow, with chestnut-brown knobs. *Abdomen yellow, with blackish sutures.* Oviduct long, with two elongate-oval valves. Legs brown; femora yellow at the base; hind tarsi snow-white, except at the base.

Lives on decayed wood.

152. **pallipes,** Winn. Linn. Ent. viii. 295. 84 (1853). *Fœm. flava, antennis* fuscis basi flavis 13-*articulatis* corpore paullo brevioribus, articulorum petiolis brevissimis, *thorace vittis tribus contiguis fuscis,* alis fuscescentibus cinereo-hirtis, venis fuscis, halteribus fuscis basi pallidioribus, *abdomine fusco-flavo* cano-piloso, oviductu brevi lamellis duabus ovatis, pedibus fuscis, tarsis albis. Long. $1\frac{1}{4}$ lin.

Fem. Yellow. Antennæ thirteen-jointed, brown, yellow at the base; joints about thrice the length of their petioles. *Thorax with three contiguous brown stripes.* Wings brownish, with grey pubescence; veins brown; anal vein and its second branch forming a rounded obtuse angle. Halteres brown, paler at the base. *Abdomen brownish-yellow,* with hoary hairs. Oviduct short, with two oval valves. Legs brown, tarsi white.

Habits unknown.

153. **leucopeza,** Meig. Zw. vi. 268. 19 (1830); Loew; Winn. *Mas, flava, antennis* fuscescentibus basi flavis 13-articulatis, *petiolis non elongatis, thorace vittis tribus nigro-fuscis,* alis fuscescentibus, *halteribus fuscis,* pedibus obscure fuscis, tarsis apice niveis. Long. $1\frac{1}{2}$ lin.

Male. Yellow. Antennæ thirteen-jointed, brownish, yellow at the base, nearly as long as the body; *joints twice the length of the petioles. Thorax with three blackish-brown stripes.* Wings brownish; anal vein and its second branch forming a rounded obtuse angle. *Halteres brown.* Abdomen with hoary hairs. Legs dark brown; tarsi white towards the tips.

Habits unknown.

154. **albimana,** Winn. Linn. Ent. viii. 296. 85 (1853). *Fœm. flava, antennis* fuscescentibus basi flavis 13-articulatis, *petiolis elongatis, thorace vittis tribus nigro-fuscis,* alis fuscescentibus cinereo-pilosis, venis obscure fuscis, halteribus fuscis, oviductu brevi lamellis duabus parvis ovatis, pedibus nigro-fuscis, tarsis apice niveis. Long. $1\frac{1}{3}$ lin.

Fem. Yellow. Antennæ thirteen-jointed, brownish, yellow at the base; *joints and their petioles of nearly equal length. Thorax with three blackish-brown stripes.* Wings brownish, with dark grey pubescence; veins dark brown; second branch of the anal vein curved to the hind border. Halteres brown. Abdomen with hoary hairs. Oviduct short, retracted, with two very small oval valves. Legs blackish-brown; tarsi whitish towards the tips.

Lives in decayed wood.

155. **albitarsis,** Meig. Zw. vi. 268. 20 (1840); Mcq.; Loew; Winn. *Fœm. flava, antennis* fusceseentibus basi flavis 13-articulatis, *petiolis non elongatis, thorace vittis tribus contiguis nigris,* alis fusceseentibus nigro-cinereo-hirtis, venis nigro-fuscis, *halteribus albis apice fuscis, abdominis incisuris nigricantibus,* pedibus nigro-fuseis, tarsis apiee niveis. Long. $1\frac{1}{4}$ lin.

Fem. Yellow. Antennæ thirteen-jointed, brownish, yellow at the base; *joints twice the length of their petioles.* Thorax *with three contiguous black stripes.* Wings brownish, with blackish-grey pubeseence; veins blackish-brown; anal vein and its seeond branch forming a rounded obtuse angle. *Halteres white with brown knobs. Abdomen with blackish sutures;* its hairs whitish. Legs blackish-brown; third and fourth joints of the tarsi white.

Lives in decayed wood.

156. **dorsalis,** Winn. Linn. Ent. viii. 297. 88 (1853). *Fœm. fusco-flava,* eapite postiee nigro, antennis nigris 13-artieulatis eorporis dimidio paullo longioribus, *petiolis non longis, thorace vittis tribus contiguis nigris,* alis fuscescentibus nigro-einereo-pilosis, venis nigro-fuseis, halteribus flavis, capitulis subtus nigrieantibus, *abdomine fasciis nigris, pedibus nigris, femoribus basi flavis.* Long. $1\frac{1}{2}$ lin.

Fem. Brownish-yellow. Head behind black. *Antennæ* thirteen-jointed, blaek, a little more than half the length of the body; *joints more than twice the length of their petioles. Thorax with three confluent black stripes.* Wings brownish; with blaekish-grey pubeseenee; veins blaekish-brown; anal vein and its seeond branch forming a rounded obtuse angle. Halteres yellow; knobs blaekish beneath. *Abdomen with black bands.* Oviduet short, retraeted, with two small, somewhat rounded valves. Legs blaek; femora and coxæ yellow at the base.

Habits unknown.

157. **venusta,** Winn. Linn. Ent. viii. 299. 90 (1853). *Mas, flava,* antennis nigris basi flavis corpore longioribus 16-artieulatis, *petiolis* albidis *longissimis, thorace vittis tribus pallide rufo-fuscis,* alis fuseeseentibus cinereo-pilosis, venis fuseis, pedibus longis pallide fuscescentibus, tarsis albieantibus. Long. 2 lin.

Male. Yellow. Antennæ sixteen-jointed, blaek, yellow at the base, longer by nearly the half than the body; *petioles* whitish, *less by one-third than twice the length of the joints. Thorax with three pale red-*

dish-brown stripes. Wings brownish, with grey pubescence; veins brown; anal vein and its second branch forming an obtuse angle. Legs long, pale brownish; tarsi whitish.

Lives on decayed wood.

158. **analis,** Winn. Linn. Ent. viii. 300. 91 (1853). *Mas, nigra,* antennis 16-articulatis corpore longioribus, articulorum petiolis elongatis, *humeris alis basi scutello et metathorace fulvis,* pectore nigro-cinereo, alis subfuscescentibus cinereo-pilosis, venis fuscis, halteribus albis, *abdomine sordide fusco-flavo incisuris nigricantibus,* pedibus longissimis nigro-fuscis, femoribus basi carneis. Long. 1 lin.

Male. Black. Antennæ sixteen-jointed, half as long again as the body, yellow at the base; petioles towards the base as long as the joints, longer by half towards the middle, and shorter towards the tips of the antennæ. *Humeri, wings at the base, scutellum, and metathorax tawny.* Pectus blackish-brown. Wings brownish, with grey pubescence; veins brown; second branch of the anal vein curved to the hind border. Halteres white. *Abdomen dingy brownish-yellow; sutures blackish.* Legs blackish-brown, very long; femora flesh-colour at the base.

Habits unknown.

159. **nigrina,** n. *Fœm. nigra,* antennis 12-articulatis corpore multo brevioribus, alis angustis subcinereis, venis nigricantibus, halteribus pedibusque fuscis, oviductu longissimo. Long. $\frac{3}{4}$; alar. 2 lin.

Fem. Black. Antennæ twelve-jointed, submoniliform, much shorter than the body; joints nearly elliptical, with very short petioles. Wings narrow, slightly greyish; veins blackish; subcostal vein nearly half the length of the wing; cubital almost straight, ending at a little behind the tip of the wing; subanal and first branch of the anal almost obsolete; second branch curved obliquely and not abruptly to the hind border. Halteres and legs brown, the latter moderately long and slender. Oviduct as long as the body.

Not rare. (E.)

The Subgen. *Epidosis* also includes the three following species:—

C. fragilis, *Loew.*
C. longipes, *Loew.*
C. scricata, *Loew.*

160. **pectoralis,** Winn. Linn. Ent. viii. 303. 95 (1853). Fulva, capite flavo, antennis pallide fuscis basi flavis, thorace vittis tribus fuscis aut nigris, alis limpidis cinereo-hirtis, venis fuscis, halteribus albidis, pedibus pallidis, femoribus tibiisque supra tarsisque fuscescentibus; *Mas,* antennis 16–24-articulatis corpore longioribus longi-verticillato-pilosis, petiolis longis; *Fœm.* antennis 15–26-articulatis corpore brevioribus, articulorum petiolis brevissimis aut nullis, oviductu elongato lamellis duabus parvis longiusculis. Long. $\frac{1}{2}$–1 lin.

Tawny. Head yellow. Antennæ pale brown, yellow at the base. Thorax with three brown or black stripes. Wings limpid, with grey

pubescence; veins brown; cubital vein ending almost at the tip of the wing; anal curved to the hind border. Halteres whitish. Abdomen with hoary hairs. Legs pale; femora and tibiæ above and tarsi brownish. *Male.* Antennæ sixteen- to twenty-four-jointed, longer by half than the body; joints as long as their petioles, longer in some parts. *Fem.* Antennæ fifteen- to twenty-six-jointed, shorter by one-third than the body; petioles very short or none. Oviduct long, with two small elongated valves.

Habits unknown.

161. **lugubris,** Winn. Linn. Ent. viii. 305. 96 (1853). *Fusco-flava,* palpis pilosis, antennis 14-articulatis, thoracis disco nigro-fusco nitido, *alis nigricantibus* nigro-hirtis, halteribus sordide flavis, capitulis nigris, femoribus tibiisque nigro-fuscis subtus flavis, tarsis nigris; *Mas,* antennis corpore vix brevioribus, articulorum petiolis elongatis; *Fœm.* antennis corporis dimidio non longioribus, petiolis brevissimis, oviductu elongato lamellis duabus longiusculis. Long. $1\frac{1}{3}$ lin.

Brownish-yellow. Palpi pilose. Antennæ fourteen-jointed. Disc of the thorax blackish-brown, shining. Wings blackish, with black pubescence, appearing whitish in some aspects; cubital vein ending at the tip of the wing; anal vein more or less curved to the hind border. Halteres dingy yellow, with black knobs. Abdomen with hoary hairs. Femora and tibiæ blackish-brown, yellow beneath; tarsi black. *Male.* Antennæ almost as long as the body; joints twice the length of the petioles. *Fem.* Antennæ half the length of the body; joints five times the length of the petioles. Oviduct elongated, with two rather long valves.

Lives in decayed wood, and in *Polyporus versicolor.*

162. **tenella,** n. *Testacea,* antennis nigris verticillato-pilosis, *alis limpidis* basi perangustis, venis testaceis; *Mas,* antennis corpore duplo longioribus; *Fœm.* antennis corpore multo brevioribus, oviductu brevi. Long. $1-1\frac{1}{4}$; alar. $3\frac{1}{2}$ lin.

Testaceous. Antennæ black, verticillate-pilose. *Wings limpid,* very narrow towards the base; veins testaceous; subcostal vein about one-third of the length of the wing; cubital curved towards the tip of the wing parallel to the border, ending near the tip; subanal slight; first branch of the anal obsolete; second branch curved abruptly and slightly obliquely to the border. *Male.* Antennæ sixteen-jointed?, about twice the length of the body; joints round, hardly half the length of their petioles, which are testaceous; whorls of hairs very long. *Fem.* Antennæ twelve-jointed?, much shorter than the body; joints nearly cylindrical, with very short petioles. Oviduct short.

Rare. (E.)

The three following species belong to the Subgen. *Asynapta:*—

C. longicollis, *Loew.*

C. longicauda, *Loew.*

C. Bouchéana, *Loew.* *Salicis,* Bouché.

The following *Cecidomyiæ* have also been noticed or described, but I cannot with certainty refer them to any group or sub-genus:—

C. pennicornis, *Linn.* On *Aristolochia Clematitis.*
C. longicornis, *Linn.* On *Cnicus palustris.*
C. Verbasci, *Vall.; Léon Duf.; Macq.* On *Verbascum Thapsus.*
C. cerealis, *Suter; Kollar.* On *Arena sativa.*
C. Poæ, *Pal. de Beauv.; Bosc.* On *Poa trivialis.*
C. Bromi, *Hammersch.* On *Bromus tectorum.*
C. nigra, *Meig.; Hammersch.* On *Pyrus communis.*
C. Pini-maritimæ; *Léon Duf.* On *Pinus maritima.*
C. Populi, *Léon Duf.* On *Populus.*
C. Ericæ, *Léon Duf.* On *Erica Scoparia.*
C. fuscicollis, *Meig.; Bouché.* On *Artemisia campestris.*
C. Pyri, *Bouché.* On *Pyrus communis.*
C. Hypcrici, *Gené.* On *Hypericum perforatum* and *H. humifusum.*
C. scutellata, *Meig.; Boie.* On *Phragmitis communis.*
C. saligna, *Hardy*, Scot. Gard. iii. 47 (1854). Rosettes of the leaves of *S. aurita* and *S. cinerea.*
C. (Rabdophaga) viminalis, *Westw.* In the pith of the willow.
C. Tiliæ, *Schr.* On the lime-tree.

In June the galls of *Cecidomyia Tiliæ?* are not uncommon on the young shoots growing from the stumps of lime-trees, by the banks of the Wye, near Chepstow. They are round or oblong, green on one side, bright red on the other; some of them contain more than twenty separate cells, each inhabited by one larva. The latter is about one line of length, of a bright yellow colour, and has the faculty of leaping like the larva of *Piophila.* It is full grown in the third week of June.

C. Populia? *Schr.* In galls on *Populus tremula.*
C.? Sonchi, *Bremi.* On *Sonchus oleraceus.*
C.? Leontodontis, *Bremi.* On *Leontodon Taraxacum.*
C. sanguinea, *Bremi.* In galls on the root-leaves of *Hieracium murorum.*
C. strobilina, *Bremi.* In excrescences on the leaves of *Salix purpurea.*
C. capitigena, *Bremi.* In knobs on the barren shoots of *Euphorbia Cyparissias.*
C. strumosa, *Bremi.* In swellings on the leaves of the shoots of *Galeobdolon luteum.*
C. Stachydis, *Bremi.* In galls on *Stachys sylvatica.*
C. Onobrychidis, *Bremi.* On *Onobrychis sativa.*
C. Rosæ, *Bremi.* On *Rosa canina.*
C. Ranunculi, *Bremi.* On the leaves of *Ranunculus bulbosus* and *Trifolium pratense.*

C. tortilis, *Bremi*. In excrescences on the leaves of *Alnus incana*.

C. Cinerearum, *Hardy*, Scot. Gard. iii. 14 (1854). Rosettes of the leaves of *S. aurita* and *S. cinerea*.

C. Salicis-folii, *Hardy*, Scot. Gard. iii. 80 (1854). Woody galls of the leaf of *S. aurita*, *S. oleifolia*, and *S. Caprea* (larva only).

C. Fraxini, *Bremi; Hardy*, Scot. Gard. iii. 139 (1854). Forms galls on ash-leaves. Not rare. (E. I.)

C. Fraxinicola, *Hardy*, Scot. Gard. iii. 141 (1854). Forms galls on ash leaves (larva only).

C. Roboris, *Hardy*, Scot. Gard. iii. 108 (1854). Rolls up the edges of the oak-leaf like a wire.

C. Rosarum, *Bremi; Hardy*, Scot. Gard. iii. 168 (1854).

C. Rhodophila, *Hardy*, Scot. Gard. iii. 170 (1854).

C. Oidii, *Hardy*, Scot. Gard. iii. 170 (1854). Mildew of roses and of the hawthorn.

C. ————? *Hardy*, Zool. vi. 2166 (1848). Nigra, alis obscuris basi subflavescentibus, abdomine carneo, pedibus pallide testaceis. Long. $\frac{3}{4}$–1 lin.

"Allied to *C. bicolor*, Meig. *Female*. Head and thorax black; sides of the latter purplish in life. Antennæ rather long, brown; joints in life pale at the base and at the tips. Wings with a dark tinge, slightly yellowish at the base, finely fringed; veins coloured with the red matter of the body, two distinctly marked. Halteres pale testaceous. Abdomen dull flesh-colour in death, purplish in life, dusky at the tip; a duskier band across each segment, bearing rows of whitish bristly hairs, most distinctly seen at the sides; beneath, with a row of dusky bristles, bearing points along the centre. Ovipositor as long as one-third of the body, flesh-coloured, slightly brown above, approaching to a bulbous form at the base, narrowed to a point, which is pale. Legs long, slender, pale testaceous. *Male*. Smaller than the female. Front and the pectus before the anterior legs pale pink-coloured. Eyes and antennæ black. Abdomen dusky, somewhat hairy, narrower than that of the female, with a row of impressions on each side above, pale at the tip, which is furnished with two hooks. Larva white, with a slight pink tinge, inhabits a large dark green protuberant gall, which rises from the middle of the flower of the tansy, *Tanacetum vulgare*."

Found by Mr. Hardy, in the county of Durham, during the autumn.

C. Danae, *Haliday, MSS*. *Fœm*. nigra, antennis moniliformibus pubescentibus, articulis ovatis contiguis, alis oblongis nigro-pubescentibus et ciliatis, abdomine maculis lateralibus albis, oviductu sat brevi, pedibus mediocriter longis.

"Female. Black. Antennæ moniliform, pubescent; the joints ovate, contiguous. Wings oblong, with black pubescence and marginal cilia. Abdomen with clear white lateral spots (or interrupted bands). Ovipositor rather short. Legs of moderate length."—*Haliday, MSS*.

Many other species have been described, but their economy has not been ascertained, and the characters assigned to them are not sufficiently definite.

The following additional species have been recorded as British :—

1. C. grandis, *Meig.* Zw. i. 94. 1 (1818).
2. C. lateralis, *Meig.* Zw. i. 96. 5 (1818).
3. C. palustris, *Linn.* Faun. Succ. 1775 (1761).
4. C. nigricollis, *Meig.* Zw. i. 97. 8 (1818).
5. C. griseola, *Meig.* Zw. i. 97. 9 (1818).
6. C. griseicollis, *Meig.* Zw. i. 97. 10 (1818).
7. C. bicolor, *Meig.* Zw. i. 98. 12 (1818).
8. C. carnea, *Meig.* Zw. i. 98. 13 (1818).
9. C. fuscipennis, *Meig.* Zw. i. 98. 14 (1818).
10. C. lutea, *Meig.* Zw. i. 99. 16 (1818).
11. C. pictipennis, *Meig.* Zw. vi. 270. 27 (1830).

Genus II. **LASIOPTERA.**

LASIOPTERA p., Meig. Zw. i. 88 (1818); Mcq.; Zett.; Loew; Winn.; Rondani. Subgen. *Lasioptera* et *Clinorhyncha*, Loew; Winn. *Tipula* p., Schr. *Cecidomyia* p., Meig. Kl. Zw.

Corpus parvum aut minimum. Caput parvum, rotundatum. Oculi lunati. *Ocelli nulli.* Proboscis brevissima. Palpi exserti, 4-articulati; articuli primus et secundus crassiores; tertius et quartus tenuiores. Antennæ 12–24-articulatæ, porrectæ, submoniliformes, corpore breviores, articulis approximatis. Thorax ovatus. *Alæ* incumbentes, latæ, pubescentes, ciliatæ; *venæ cubitalis et subapicalis obsoletæ*, subanalis distincta, analis plus minusve obsolete furcata. Abdomen cylindricum, segmentis 8. Pedes plerumque longi, graciles, tarsis longissimis, metatarso sæpissime brevissimo.

Body delicate, small or very small. Head small, sphæroidal, sessile. Eyes lunate. *Ocelli none.* Proboscis very short. Palpi exserted, four-jointed; first and second joints thicker than the others. Antennæ porrect, twelve- to twenty-four-jointed, not much longer than the head and the thorax together, submoniliform; joints approximate, somewhat hairy. Thorax oval. Wings incumbent, broad, hairy, ciliated; costa in some species thickened, and concealing the mediastinal and subcostal veins; *cubital and subapical veins obsolete;* subanal distinct; anal forked, the first branch indistinct or obsolete. Abdomen cylindrical, with eight segments. Legs generally long and slender; tarsi very long; metatarsus most often very short.

The *Lasiopteræ* infest plants, and are nearly similar to the *Cecidomyiæ* in their habits and economy. The species are few in number, and generally of rare occurrence.

a. Metatarsus short.
b. Abdomen with yellow bands. Species 1.
b b. Abdomen wholly black. Species 2.
a a. Metatarsus long. Species 3.

1. **picta,** Meig. Zw. i. 89. 1 (1818); Winn. *Picea, capite, halteribus abdominis fusciis interruptis ventreque flavis,* antennis nigris, *thoracis lateribus pectoreque fulvis, alis limpidis,* tibiis apice tarsisque nigris. Long. 1¼; alar. 3 lin.

Piceous. Head yellow. Antennæ black. *Thorax tawny on each side and beneath. Wings limpid;* veins and cilia black; costa apparently thick, the costal, mediastinal, and subcostal veins being contiguous; subanal vein straight; anal indistinctly forked, forming with its second branch an extremely obtuse angle, its first branch almost obsolete. *Halteres yellow. Abdomen with an interrupted yellow band on each segment; underside yellow. Legs* long, slender, *yellow; tarsi longer than the tibiæ; hind tarsi about thrice the length of the tibiæ;* tarsi and tips of the tibiæ black.

Rare. In the British Museum. (E.)

2. **albipennis,** Kl. Zw. i. 40. 5 (1804). *Atra, alis limpidis apice subcinereis,* venis nigris, costa albo-uniguttata, *pedibus piceis* validiusculis. Long. 1¼; alar. 3 lin.

Deep black. Wings limpid, greyish at the tips; veins and cilia black; costa with a white spot at the tip of the subcostal vein; subcostal and mediastinal veins distinct, separate; subanal vein straight; anal forming with its second branch a slightly curved line; first branch indistinct, very near the anal vein. *Legs piceous, rather stout, moderately long; tarsi longer than the tibiæ.*

Rare. In the British Museum. (E.)

3. **stygia,** Hoffm. MSS.; Meig. Zw. i. 91. 7 (1818). *Obscure fusca, subtus sordide flava,* antennis nigris, *alis nigro-cinereis* pubescentibus, venis nigris, *pedibus validiusculis albidis.* Long. ¾; alar. 2 lin.

Brownish, dingy yellow beneath. Antennæ black. *Wings dark grey, very thickly pubescent;* veins black; subcostal vein distinct, ending at beyond three-fourths of the length; subanal distinct, indistinctly forked towards its tip; anal forming a very obtuse angle near its tip; the fore branch obsolete. *Legs rather stout, moderately long, with whitish reflections; metatarsus longer than any of the following joints.*

Rare. (E.)

Lasioptera Rubi, Schr., lives in excrescences on the stems of different species of *Rubus,* and probably is also a British species. *L. auricincta,* Winn., lives at the roots of *Festuca pratensis,* changes to a pupa in a snow-white covering, and appears two weeks afterwards in the fly state.

Family IV. BIBIONIDÆ.

Hirteides, Bilb.; Zett. *Bibionites*, Newm. *Bibionides*, Westw. *Tipulariæ muscæformes* p., Meig. *Scatopsides*, Zett.

Corpus magnum aut mediocre. *Ocelli tres. Prothorax conspicuus. Mesothoracis scutum indivisum. Alæ* sat latæ; *areola discalis nulla.*

Body large, of middling or of very small size. *Ocelli three. Prothorax conspicuous. Scutum of the mesothorax undivided. Wings* moderately broad, *with no discal areolet.*

The *Scatopsides* are united to the *Bibionidæ*, and this family will thus contain two distinct groups, each of which contains two British genera.

- Antennæ
  - subcylindrical
    - nine-jointed . . . . . Bibio.
    - eleven-jointed. Palpi
      - long . . . Dilophus.
      - very short . Scatopse.
  - capitate . . . . . Aspistes.

Genus I. **BIBIO.**

Bibio, Geoffr. H. N. Ins. (1764); Latr.; Oliv.; Meig.; Mcq.; Curt.; Loew; Westw. *Tipula* p., L.; F. Sp. Ins.; D. G.; Gmel.; Schr.; Panz. *Hirtea* p., F. E. S.; Meig. Kl. Zw.; Zett.

Corpus validum, elongatum, magnum aut mediocre. Ocelli tres. Labrum breve, trigonum. Lingua lanceolata. Labium bilobatum, hirtissimum. Palpi 5-articulati, pilosi; articulus primus brevissimus; secundus linearis, tertio longior; tertius et quartus subclavati; quartus tertio brevior; quintus linearis, quarto longior et multo gracilior. Antennæ 9-articulatæ, breves, submoniliformes, porrectæ; articuli primus et secundus sublineares, pilosi; tertius et sequentes transversi; nonus rotundatus. Thorax subovatus, valde convexus. Alæ sat latæ, non elongatæ. Halteres longi. Abdomen 9-annulatum, thorace multo longius. Pedes validi; femora et tibiæ canaliculata; tibiæ calcaribus duabus apicalibus, anticæ spina longa robusta apicali; tarsi non elongati. *Mas.* Caput latum, rotundatum. Oculi maximi, supra conjuncti. Abdomen apice obtusum. Tibiæ posticæ clavatæ. *Fœm.* Caput ovatum, angustum. Ocelli parvi, remoti. Abdomen apice acuminatum.

Body stout, elongated, large or of middle size. Ocelli three, approximate. Labrum short, triangular, membranous and pubescent at the apex. Lingua lanceolate, dilated at the base, membranous and pubescent at the apex, as long as the labrum. Labium shorter than the head, membranous, bilobed, very hairy. Palpi five-jointed, pilose; first joint very short; second linear, longer than the third; third and

fourth subclavate; fourth shorter than the third; fifth linear, longer and much more slender than the fourth. Antennæ nine-jointed, submoniliform, porrect, short; first and second joints nearly linear, pilose; third and following joints transverse; ninth rounded. Thorax nearly oval, very convex. Wings of moderate size; costal vein ending at a little in front of the tip of the wing; mediastinal and subcostal veins ending at beyond half the length of the wing; the first very slight; radial ending at before two-thirds of the length; cubital proceeding from the angle of the præbrachial transverse veinlet, ending at the tip of the costal vein; subapical forked before two-thirds of the length of the wing, its fore fork curved; præbrachial emerging from the subanal at one-third of the length of the wing, ending at an equal distance between the subapical and the subanal; anal not reaching the border; subaxillary imperfect; areolets thirteen,—the humeral, the radical, the mediastinal, the radial, the cubital, the præbrachial, the pobrachial, which is much longer than the præbrachial, the subapical, three externo-medial, the anal, and the axillary, the two latter being partly united; posterior margin forming an acute angle at full twice the length of the humeral areolet from the base. Halteres long. Abdomen with nine segments, much longer than the thorax. Legs stout, moderately long; femora and tibiæ channelled; tibiæ with two apical spurs; fore tibiæ with a long apical spine; joints of the tarsi from the first to the fourth successively decreasing in length; fifth a little longer than the fourth; ungues and onychia distinct. *Male.* Body very hairy. Head large, broad. Eyes very large, very hairy, connected above. Abdomen obtuse at the tip; hind tibiæ clavate. *Female.* Body rather hairy. Head slender. Eyes small, remote. Abdomen acuminated at the tip. Larva subterraneous, vermiform, cylindrical, furnished with twenty spiracles, and with transverse rows of short hairs, which serve for locomotion. Head furnished with two obtuse hooks. Pupa naked, enclosed in a smooth oval cell; its thorax very gibbose, with the rudimental wings and legs very short.

The species of *Bibio* are mostly vernal; they abound chiefly in meadows, and occasionally appear in great numbers; their larvæ feed on the roots of grass. The males, like other *Nemoceræ,* often hover in the air, with their hind legs vertical. "The legs all point backwards in flight, the long anterior pair forming an acute angle with the body." The species may be grouped thus:—

a. Legs of the male and of the female wholly black. Species 1–4.
a a. Legs of the male and of the female partly red.
  b. Femora of the male red. Species 5.
  b b. Femora of the male black.
    c. Body of the male with black hairs. Species 6.
    c c. Head and thorax of the male with black hairs; abdomen with pale hairs. Species 7, 8.
    c c c. Head of the male with black hairs; thorax and abdomen with pale hairs. Species 9.

c c c c. Thorax and abdomen of the male partly with black, partly with pale hairs. Species 10.

a a a. Legs of the male black, of the female red. Species 11, 12.

1. **Marci,** L. S. N. ii. 976. 38 (1767); D. G.; F.; Gmel.; Geoff.; Schr.; Panz.; Meig.; Meq.; Loew; Gim.; Zett.—*brevicornis* (*mas*), L.; F.; Gmel.—*febrilis*, Z.; F.; Schr.; Gmel. Ater, *nigro-pilosus; Mas, alis albis ad costam nigricantibus,* stigmate nigricante, *venis albis apud costam nigris; Fœm. alis fuscis ad costam nigricantibus, venis fuscis apud costam nigris.* Long. 4–5; alar. 8–10 lin.

Deep black, *clothed with black hairs. Male. Wings white, blackish along the costa;* stigma blackish; *veins towards the costa black, the rest white. Fem. Wings brown, blackish along the costa; veins towards the costa and stigma black, the rest pale brown.*

Generally distributed. Its appearance is nearly contemporaneous with St. Mark's day, whence its name. (E. S. I.)

2. **leucopterus,** Meig. Kl. Zw. i. 110. 5 (1804); Hal.; Zett. Ater, *nigro-pilosus; Mas, alis albis, venis albis apud costam nigris; Fœm. alis nigricantibus.* Long. 3–4; alar. 6–8 lin.

Black. *Male. Body clothed with black hairs. Wings white; veins towards the costa and stigma black, the other veins white. Fem. Wings blackish, darker along the costa; stigma and veins black.*

Not common. A vernal species. (E. I.)

3. **hortulanus,** L. S. N. ii. 977. 46 (1767); Geoff.; F.; Gmel.; Rossi; Schr.; Latr.; Meig.; Meq.; Gim.; Loew; Zett. Niger, *albido-hirtus; Mas, alis limpidis ad costam fuscis, venis albis apud costam nigro-fuscis; Fœm. thoracis dorso abdomineque rufo-luteis, alis cinereis ad costam fuscis.* Long. 3–4; alar. 6–8 lin.

Black. *Body clothed with whitish hairs. Male. Wings limpid, brown along the costa; stigma and veins towards the costa blackish-brown; the other veins white. Fem. Thorax above and abdomen reddish-luteous. Wings grey, brown along the costa;* veins towards the costa and stigma blackish-brown; the other veins whitish.

Not rare. A vernal species. (E. S. I.)

4. **venosus,** Meig. Zw. i. 315. 10 (1818); Curt.! B. E. 138; Meq.; Guér.; Zett.—*nervosa*, Meig. Kl. Zw. Niger, *albido-pilosus, alis albido-hyalinis,* stigmate minore nigro subovato, *venis pallide fuscis basi albis apud costam nigris.* Long. $3\frac{1}{2}$–4; alar. 7–8 lin.

Black, *clothed with whitish hairs. Wings whitish-hyaline;* stigma rather small, black, nearly oval; *veins towards the costa black; the rest pale brownish, white towards the base.*

Not common. A vernal species. (E.)

5. **Pomonæ,** F. Sp. Ins. ii. 410. 52 (1781); Gmel.; Herbst; Donov.; Latr.; Meig.; Meq.; Gim.; Loew; Zett. Niger, nigro-pilosus, alis limpidis, stigmate nigricante, venis albis apud costam nigris, femoribus rufis. Long. $3\frac{1}{2}$–$4\frac{1}{2}$; alar. 7–9 lin.

Black, clothed with black hairs. Wings limpid; stigma blackish; veins towards the costa black, the rest white. Femora red.

Not rare. Vernal and autumnal. (E. S. I.)

6. **Johannis,** L. S. N. ii. 976. 41 (1767); D. G.; Geoff.; Latr.; Meig.; Mcq.; Gim.; Zett.; Loew.—*Pyri*, F.—*præcox*, F.—*hyalina*, Meig. Kl. Zw.—*Pomonæ*, Schr.—*Marci?* Schr. Niger; *Mas*, nigro-pilosus, alis albis, venis albis apud costam nigris, tibiis tarsisque rufescentibus; *Fœm.* alis subcinereis, venis pallide fuscis apud costam obscurioribus. Long. $2\frac{1}{2}$–3; alar. 5–6 lin.

Black. *Male.* Clothed with black hairs. Wings white; stigma and veins towards the costa black, the other veins white. Tibiæ and tarsi reddish, the latter black towards the tips. *Fem.* Clothed with short black hairs. Wings slightly greyish; veins towards the costa and stigma brown, the other veins pale brown.

Generally distributed. Its appearance is nearly contemporaneous with St. John's day, whence its name. (E. S. I.)

7. **ferruginatus,** L. S. N. ii. 976 (1767); F.; Gmel.; Meig.; Mcq.; Gim.; Loew; Zett.—*flavicaudis*, D. G.—*fulviventris?* Meg.; Meig. Niger; *Mas*, nigro-pilosus, alis cinereis ad costam fuscescentibus, abdomine albo-piloso, *tarsis rufescentibus; Fœm.* alis subcinereis, *venis albidis* apud costam fuscis, pedibus rufis. Long. $3\frac{1}{2}$–4; alar. 7–8 lin.

Black. *Male.* Head and thorax clothed with black hairs. Wings grey, brownish along the costa; stigma dark brown; veins black towards the costa, the rest pale brown. Abdomen clothed with white hairs. *Tarsi reddish. Fem.* Wings greyish; stigma and veins towards the costa dark brown, *the other veins whitish.* Legs red.

Common. A vernal species. (E. I.)

8. **lanigerus,** Hoffm.; Meig. Zw. i. 317. 14 (1818); Hal.—*vernalis*, Meig.; Mcq.; Zett.—*laniger*, Meig. Zw. vi.; Mcq.; Loew. Niger; *Mas*, nigro-pilosus, alis subcinereis ad costam fuscis, abdomine albido-piloso, *tibiis tarsisque rufis; Fœm.* alis subcinereis ad costam obscurioribus, *venis pallide fuscis* apud costam obscurioribus, pedibus rufis. Long. $2\frac{1}{2}$–3; alar. 5–6 lin.

Black. *Male.* Head and thorax clothed with black hairs. Wings greyish, brown along the costa; stigma dark brown; veins towards the stigma black, the other veins pale brown. Abdomen clothed with whitish hairs. *Tibiæ and tarsi red. Fem.* Wings greyish, a little darker along the costa; stigma and veins towards the costa brown, *the other veins pale brown.* Halteres brown. Legs red; tarsi darker; trochanters and knees black.

Generally distributed. A vernal species. (E. S. I.)

9. **nigriventris,** Hal. E. M. i. 157 (1833); Loew; Zett.—*albipennis*, Meig.—*lacteipennis*, Zett. Niger; *Mas*, albido-pilosus, capite nigro-piloso, alis subcinerascentibus, venis pallide fuscis ad costam

nigro-fuscis; *Fœm.* alis cinereis ad costam fuscescentibus, pedibus rufis. Long. $2\frac{1}{2}$–3; alar. 5–6 lin.

Black. *Male.* Head clothed with black hairs. Thorax and abdomen clothed with whitish hairs. Wings very slightly greyish, a little darker along the costa; stigma and veins towards the costa blackish-brown, the other veins pale brown. Tarsi and hind tibiæ reddish or reddish-piceous. *Fem.* Wings grey, brownish along the costa; veins towards the costa and stigma brown, the other veins pale brown. Legs red; coxæ, trochanters, knees, spines of the fore tibiæ, and tips of the tarsi black.

Not common. A vernal species. (E. I.)

10. **hybridus,** Hal. E. M. i. 157 (1833); Loew. *Mas,* niger, pallide pilosus, pilis capitis abdominisque segmenti primi omnibus, thoracis scutellique ex parte nigris, tibiis tarsisque ferrugineis. Long. 2–$2\frac{1}{4}$; alar. 4 lin.

Male. Black, clothed with pale hairs. Hairs of the head and of the first abdominal segment wholly, of thorax and of the scutellum partly, black. Tibiæ and tarsi ferruginous.

Rare. (I.)

11. **nigripes,** Meig. Zw. i. 316. 9 (1818); Gim. Niger; *Mas,* nigro-hirtus, *alis subcinereis* apud costam obscurioribus, abdomine albo-piloso; *Fœm. alis subcinereis,* pedibus rufis. Long. 3–$3\frac{1}{2}$; alar. 6–7 lin.

Black. *Male.* Head and thorax clothed with black hairs. *Wings greyish,* dark grey along the costa; stigma dark brown; veins towards the costa black, the other veins pale brown. Abdomen clothed with white hairs. *Fem.* Body clothed with short whitish hairs. *Wings greyish,* a little darker along the costa; stigma brown; veins towards the costa black, the other veins pale brown. Legs red; tips of the femora, of the tibiæ, and of the joints of the tarsi black.

Not common. (E. S.)

12. **clavipes,** Meig. Zw. i. 317. 3 (1818); Hal.; Meq.; Zell.; Gim.; Loew; Zett.—*Johannis* p., F.; Gmel.; Schr.; Meig. Kl. Zw. —*dorsalis,* Meg.; Meig.—*flavicollis,* Meg.; Meig.—*fulvicollis?* Gim. —*ephippium,* Zett. I. L. Niger; *Mas,* nigro-pilosus, *alis limpidis ad costam nigricantibus,* abdomine albo-piloso; *Fœm.* thorace nonnunquam plus minusve rufo, pectore ventreque rufescentibus, alis sublimpidis, pedibus rufis. Long. 3–4; alar. 6–8 lin.

Black. *Male.* Head and thorax clothed with black hairs. *Wings limpid,* blackish along the costa; stigma and veins towards the costa black, the other veins white. Abdomen clothed with white hairs. *Fem. Wings nearly limpid;* stigma and veins brown. Pectus and abdomen reddish beneath. Legs red; tips of the femora and of the tarsi and fore tibiæ black.—Var. β. Thorax with two red spots in front.—Var. γ. Thorax red, with three black dorsal stripes.—Var. δ. Thorax red, with two black dorsal stripes.—Var. ϵ. Thorax wholly red.

Generally distributed. An autumnal species. (E. S. I.) It is possible that the preceding description comprises two species, for Mr. Haliday has remarked that *B. dorsalis* appears only in woods, and that *B. clavipes* is common during the autumn in turnip-fields, where *B. dorsalis* does not occur.

Genus II. **DILOPHUS.**

DILOPHUS, Meig. Zw. i. 305 (1818); Mcq.; Westw.; Zett. *Tipula* p., L.; F. E. S.; Müll.; Schr.; Gmel. *Hirtea* p., F. Suppl. *Bibio* p., Latr.

Corpus validum, elongatum, mediocre. Ocelli tres. Labrum breve, trigonum. Lingua lanceolata. Labium bilobatum, hirtum. Palpi 5-articulati, hirti; articulus primus brevis; secundus longior; tertius adhuc longior, dilatatus; quartus et quintus graciles, lineares. *Antennæ* 11-*articulatæ*, breves, submoniliformes, porrectæ; articuli primo ad septimum transversi, cyathiformes; tertius sat magnus; octavus, nonus, decimus, et undecimus clavam fingentes ellipticam. Thorax subovatus. Prothorax seriebus duabus transversis pectinato-denticulatis. Alæ sat latæ, non elongatæ. Halteres longi. Abdomen 9-annulatum, thorace longius. Pedes validi; tibiæ anticæ extus bispinosæ, apice bicalcaratæ. *Mas.* Corpus pilosum. Caput latum, rotundatum. Oculi maximi, hirti, supra connexi. Abdomen angustum. *Fœm.* Corpus fere glabrum. Caput ovatum, angustum. Oculi parvi, remoti, nudi. Abdomen latius.

Body stout, elongate, of moderate size. Ocelli three. Labrum short, trigonate. Lingua lanceolate. Labium bilobed, hairy. Palpi five-jointed, hairy; first joint short; second longer; third still longer, dilated; fourth and fifth slender, linear. Antennæ eleven-jointed, short, submoniliform, porrect; joints from the first to the seventh transverse, cyathiform; third rather large; eighth, ninth, tenth, and eleventh forming an elliptical club. Thorax nearly oval, with two transverse ridges in front. Wings of moderate size; costal vein ending at hardly in front of the tip of the wing; subcostal and mediastinal veins ending at beyond half the length, the latter slight; radial ending a little beyond the subcostal; cubital proceeding from the angle formed by the præbrachial transverse veinlet, joining the costal before the tip of the latter; subapical forked at a little before two-thirds of the length of the wing; præbrachial emerging from the subanal at a little beyond two-thirds of the length of the wing, ending at nearer to the subapical than to the subanal, connected by an oblique transverse veinlet with the fork of the subapical; anal and axillary veins imperfect. Halteres rather long. Abdomen with nine segments, longer than the thorax. Legs moderately stout; fore tibiæ with two spines on the outer side, and with two apical spurs; joints of the tarsi from the first to the fourth successively de-

creasing in length; fifth much longer than the fourth; ungues and onychia distinct. *Male.* Head broad. Eyes very large, connected above. Abdomen obtuse at the tip. *Fem.* Head narrow. Eyes small, remote. Abdomen slightly acuminated.

This genus is nearly allied to *Bibio* in habit, structure, and economy.

1. **spinatus,** Müller, Faun. Fridr. 695; Zool. Dan. Prodr. 169. 1982 (1776).—*nigritus,* Oliv.—*forcipatus,* Latr.; Schr.—*febrilis,* Meig. Klass.—*vulgaris,* Meig.; Mcq.; Gim.; Loew.; Zett. Niger; *Mas, alis albis, apud costam pallide fuscis, venis albis apud costam nigris; Fœm. alis nigricantibus,* apud marginem postieum cinereis, apice sublimpidis. Long. $2\frac{1}{2}$–$3\frac{1}{2}$; alar. 5–7 lin.

Black. *Male. Wings white, slightly clouded with pale brown along the costa;* stigma blackish; *veins towards the costa black,* the other veins white. *Fem. Wings blackish,* grey along the hind border, nearly limpid at the tips; stigma and veins black.

Generally distributed. (E. S. I.) "In profusion everywhere, most so on sand-hills. Appears in conservatories even during a severe frost in the middle of winter."—*Hal. MSS.*

2. **femoratus,** Meig. Zw. i. 307. 2 (1818); Mcq.; Zett.; Gim. Nigra, *alis albis,* stigmate nigro-fusco, *venis albis apud costam fuscescentibus; Fœm. femoribus rufis.* Long. $2\frac{1}{2}$–3; alar. 5–6 lin.

Black. *Wings white;* stigma blackish-brown; *veins towards the costa brownish,* the rest white. *Fem. Femora* and fore coxæ *red.*

"Common on *Umbelliferæ.*"—*Hal. MSS.* (E. I.)

Genus III. **SCATOPSE.**

SCATOPSE, Geoff. H. N. Ins. (1764); Schr.; Fab. S. A.; Meig.; Mcq.; Loew; Zett. *Tipula* p., L.; F. E. S.; D. G. *Hirtea* p., F. Suppl. *Ceria,* Seop.

Corpus parvum aut minimum, elongatum, glabrum, nitidum. Caput rotundatum, thorace angustius. Oculi reniformes, margine antico pro antennarum insertione nonnihil excisi, non connexi. Ocelli tres. Palpi occulti, uniarticulati. Antennæ 11-articulatæ, porrectæ, crassiusculæ, cylindricæ, submoniliformes, capite paullo longiores, articulo undecimo rotundato. Thorax convexus, ovatus. Scutellum parvum. Alæ longæ, nudæ, hyalinæ; venæ apud costam bene determinatæ, in disco indistinctæ. Halteres distincti. Abdomen depressum, linearc aut obconicum, segmentis 6 vel 7 distinctis. Pedes simplices, nudi, inermes, subæquales. *Mas.* Abdomen basi subcontractum, apice obtusum. *Fœm.* Abdomen lineare, apice subacuminatum.

Body small, or very minute, long, narrow, smooth, shining. Head rounded, narrower than the thorax. Eyes reniform, remote, slightly excavated at the insertion of the antennæ. Ocelli three. Palpi very

short, hidden, apparently one-jointed. Antennæ eleven-jointed, porrect, cylindrical, rather stout, nearly moniliform, a little longer than the head, the eleventh joint rounded. Thorax convex, oval. Scutellum small. Wings long, bare, hyaline; veins very distinct towards the costa, indistinct in the disc of the wing; subcostal vein proceeding from near the base of the wing, varying in length; radial proceeding from the angle of the transverse vein, which bounds the præbrachial areolet, varying in length; subapical including the tip of the wing between its forks, which commence opposite the tip of the radial vein, with which its fore fork is connected by a slightly recurrent transverse vein; pobrachial vein nearly obsolete, as are also its two forks, the externo-medial and the subanal veins; anal and subaxillary veins distinct, the latter very undulating. Areolets twelve,—the subcostal and the radial, which are partly united, the cubital, the præbrachial, which is very small, the pobrachial, which is open and imperfect, three subapical, the externo-medial and the anal, which are imperfectly divided from the pobrachial, the axillary, and the subaxillary. Posterior margin slightly curved inward, but not angular near the base. Halteres distinct. Abdomen depressed, linear or obconical, with six or seven distinct segments, longer than the thorax. Legs simple, bare, unarmed, nearly equal in size.

Larva long, fusiform, apod, with two short points at the sides of the prothorax and of the eight basal segments of the abdomen, which is terminated by two elongated divergent setæ. Feeds on decaying vegetable or animal substances.

The species may be grouped thus:—

a. Radial vein longer than two-thirds of the wing.

b. Subcostal vein less than one-third of the wing. Species 1, 2.

b b. Subcostal vein about one-third of the wing. Species 3.

b b b. Subcostal vein more than one-third of the wing. Species 4–7.

a a. Radial vein longer than half the wing. Species 8–12.

a a a. Radial vein half the length of the wing. Species 13.

a a a a. Radial vein one-third of the length of the wing. Species 14.

1. **notata,** L. F. S. 1773 (1761); Gmel.; Schr.; Latr.; Meig.; Mcq.; Gim.; Zett.; Loew.—*nectaria*, L.; Gmel.—*decemnodia*, Scop.—*nigra*, Geoff.; Schr.; Latr.; Meig.; Mcq.; Gim.—*latrinarum*, D. G.; Meig. Kl. Zw.; Oken.—*albipennis*, F.; Meig. Kl. Zw.—*punctata*, Meig.; Zett. I. L.; Gim.; Perris. Atra, nitens, alis limpidis, thoracis lateribus nonnunquam albo-vittatis, alis limpidis, venis albis apud costam nigris; *Mas*, metatarso postico abbreviato. Long. 1–1¼; alar. 2½–3 lin.

Black, shining. Wings limpid; costal, subcostal, and radial veins black, the rest white; subcostal vein ending before one-third of the length of the wing; radial ending with the costal beyond two-thirds of the length.—Var. β. A white stripe on each side of the thorax.

Generally distributed; frequents flowers, walls, windows, and

sewers, from the spring to the autumn, and occasionally dwells in clusters beneath the bark of pales. (E. S. I.)

2. **bifilata,** Hal. MSS. *Nigra, thorace parum nitido subtilissime pallido pubescente, pedibus nigro-fuscis, tibiis luteis apice (tibiis posticis etiam annulo medio) nigricantibus, alis hyalinis,* radice, lineola ante alas et puncto infra (hoc obscurius) flavis, venis costali subcostali et radiali pallide flavis, cæteris decoloribus, halteribus flavidis; *Mas,* abdomine apice valvulis 2 subfalcatis nigris, filis 2 erectis pallidis tarso postico longioribus, altero paullo longiore apice setacco, altero obtuso; *Fœm.* abdominis apice valvulis compressis obtusis, antennis articulis discretis. Long. fere $1\frac{1}{2}$; alar. fere 4 lin.

Black. Thorax with very fine pale pubescence, slightly shining. Wings limpid; primary veins pale yellow, the rest colourless. Halteres yellowish. *Legs piceous black; tibiæ luteous, with blackish tips; hind tibiæ with a blackish band across the middle. Male.* Abdomen with two subfalcate apical valves. *Fem.* Joints of the antennæ not crowded together. Abdomen with two apical, obtuse, compressed valves, and with two long apical setæ; one setaceous at the tip, rather longer than the other, which is obtuse.

Rare. In Mr. Haliday's collection. (I.)

3. **consimilis,** Hal. MSS. *Nigra, nitida,* antennis brevioribus quam *S. notatæ, alis hyalinis,* vena costali pallide flava, subcostali et radiali adhuc pallidioribus, cæteris decoloribus, halteribus albidis, venis decursu fere qualibus *S. scutellatæ,* modo radiali costa parallela quam attingit flexu subito (abruptius quam *S. notatæ*), porro vena radiali paullo propiore ab apice venæ subcostalis, et areola subcostalis fere angustiore, pedibus piceis, tibiis basi luteis. Long. vix 1; alar. $2\frac{1}{2}$ lin.

Black, shining. Antennæ shorter than in *S. notata.* Thorax narrow, compressed. *Wings limpid;* primary veins yellow. Halteres whitish. *Legs piceous; tibiæ luteous at the base.*

Not rare on *Umbelliferæ.* In Mr. Haliday's collection. (I.)

4. **flavicollis,** Meig. Zw. i. 302. 8 (1818); Meq.; Gim.; Loew; Zett.—*ochracea,* Meig. *Fulva,* capite antennisque nigris, alis sublimpidis, venis albis apud costam fulvis, abdominis dorso nigro; var. β. thoracis dorso nigro. Long. 1–$1\frac{1}{4}$; alar. 3–$3\frac{1}{2}$ lin.

Tawny. Head and antennæ black. Wings nearly limpid; costal, subcostal, and radial veins tawny, the rest white; subcostal vein ending at very much beyond one-third of the length of the wing; radial ending with the costal at much beyond two-thirds of the length; subapical with very long forks. Abdomen black above, excepting the hind borders of the segments.—Var. β. disc of the thorax black.

Appears in the autumn; frequents the flowers of the Ivy, and often appears on the Oak and on the Larch, amongst swarms of *S. picea,* feeding on the honeydew of *Aphis Roboris* and of *A. Laricis.* (E. I.)

5. **picea,** Hoffm. Meig. Zw. i. 302. 7 (1818).—*scutellata?*, Fries MSS.; Loew; Zett. *Picea*, antennis nigris, thoracis lateribus testaceis, alis limpidis, venis halteribusque albidis, illis apud costam fulvis, tibiis basi testaceis. Long. 1; alar. 3 lin.

Piceous. Antennæ black. Thorax testaceous on each side. Wings limpid; costal, subcostal and radial veins tawny, the rest and the halteres whitish; tibiæ testaceous towards the base.

Associates with the preceding species, and is much more abundant. (E. I.)

6. **infumata,** Hal. E. M. i. 157 (1833).—*nigripennis?*, Meig.—*fuscinervis*, Loew.—var.? *annulipes*, Roser. *Nigra, alis cinereis*, venis fuscescentibus, ad costam nigris, *tibiis basi apiceque albis, tarsis albis apice nigris.* Long. $\frac{3}{4}$; alar. 2 lin.

Black. Wings grey; costal, subcostal, and radial veins black, the rest brownish; subcostal vein ending at a little beyond one-third of the length of the wing; radial ending with the costal at beyond two-thirds of the length. Halteres white. *Tibiæ white towards the base and at the tips; tarsi white, black towards the tips.*

"Rare, in moist groves." (E. I.)

7. **minuta,** Meig. Zw. i. 301. 4 (1818).—*dubia*, Meig. Kl. Zw. *Nigra, alis sublimpidis, venis albis apud costam nigris.* Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Black. Wings nearly limpid; costal, subcostal and radial veins black, the rest white; subcostal vein ending at rather beyond one-third of the length of the wing; radial ending with the costal at a little beyond two-thirds of the length.

Not rare. (E. S.)

8. **clavipes,** Loew; Linn. Ent. i. 333. 7 (1846); Zett. *Nigra, alis limpidis*, venis albis apud costam nigris, pedibus validis nigro-piceis; *Mas, tibiis posticis clavatis; Fœm. tibiis posticis subclavatis.* Long. $1\frac{1}{2}$; alar. 3 lin.

Black, shining, *Wings limpid;* costal, subcostal, and radial veins black, the rest white; subcostal vein ending at beyond one-third of the length of the wing; radial at some distance from the costal, ending with the costal at much before two-thirds of the length. Legs stout, blackish piceous. *Male. Hind tibiæ clavate. Fem. Hind tibiæ slightly clavate.*

Rare. In the British Museum. (E.)

9. **integrata,** n. *Nigra, alis subcinerascentibus*, venis albidis apud costam nigris. Long. $\frac{2}{3}$; alar. $1\frac{1}{4}$ lin.

Black. Wings very slightly greyish; costal, subcostal, and radial veins black, the rest whitish; *subcostal ending at about one-fourth of the length of the wing;* radial ending at some distance before two-thirds of the length.

Rare. (E.)

10. **soluta,** Loew, Linn. Ent. i. 335. 8 (1846). *Nigra, alis limpidis,* venis albis apud costam testaceis, *vena radiali a costa remota, subapicalis ramo antico basi interrupto.* Long. 1; alar. 2 lin.

Black. Wings limpid; costal, subcostal, and radial veins testaceous, the rest white; *subcostal ending at a little beyond one-third of the length of the wing; radial rather far from the border,* ending at some distance beyond half the length.

Common. (E. I.)

11. **simplex,** n. *Nigra, alis subcinereis,* venis albidis apud costam nigris. Long. $1\frac{1}{2}$; alar. $1\frac{1}{2}$ lin.

Black. Wings slightly grey; costal, subcostal, and radial veins black, the other veins whitish; *subcostal vein ending at about one-third of the length of the wing;* radial ending with the costal at some distance beyond half the length.

Rare. (E.)

12. **albitarsis,** Zett. Dipt. Scand. ix. 3408. 14 (1850). *Nigra, elongata, alis albis,* venis albis apud costam testaceis, *tarsis albis.* Long. $1\frac{1}{4}$; alar. 2 lin.

Black. Body rather long. Wings white; costal, subcostal, and radial veins testaceous, the rest white; subcostal vein ending at a little before half the length of the wing; radial ending at a little beyond half the length. Tarsi white.

Common. (E. I.)

13. **halterata,** Meig. Zw. vii. 55. 16 (1838); Loew. Nigra, alis limpidis, venis albis apud costam nigricantibus. Long. $\frac{2}{3}$; alar. $1\frac{1}{3}$ lin.

Black. Wings limpid; costal, subcostal and radial veins blackish, the other veins white; subcostal ending at a little beyond one-fourth of the length of the wing; radial ending with the costal at half the length.

Rare. (E.)

14. **brevicornis,** Meig. Zw. vi. 314. 11 (1830); Loew; Zett.—*septemnodia,* Schr. Nigra, antennis brevissimis, alis albis, venis albis apud costam nigricantibus. Long. $\frac{1}{2}$–$\frac{2}{3}$; alar. $\frac{2}{3}$–$\frac{3}{4}$ lin.

Black. Antennæ very short. Wings white; costal, subcostal, and radial veins blackish, the rest white; subcostal ending at about one-fourth of the length of the wing; radial ending with the costal at one-third of the length.

Common. (E. S. I.)

Genus IV. **ASPISTES.**

Aspistes, Hoffm.; Meig. Zw. i. 319 (1818); Meq.; Zell.; Loew; Zett.

Corpus minutum, oblongo-ovatum, glabriculum, nitidum. Caput ro-

tundatum, thorace angustius et humilius. Oculi remoti, integri. Ocelli tres. Palpi occulti. Antennæ 12-articulatæ?, porrectæ, crassiusculæ, subcylindricæ, capitatæ, capite paullo longiores. Thorax gibbus, disco antico macula scutelliformi subquadrato-ovali subtiliter punctulata. Scutellum transversum. Alæ magnæ, nudæ, hyalinæ. Halteres distincti. Abdomen 8-annulatum, latum, depressum. Pedes validiusculi, subpubescentes; antici coxis majoribus, femoribus crassis aut crassissimis subtus setulosis, tibiis intus spina longiuscula terminatis; tibiæ posteriores apice breviter calcaratæ.

Body very small, oblong-oval, shining, nearly smooth. Head rounded, narrower and lower than the thorax. Eyes remote, entire. Ocelli three. Palpi hidden. Antennæ twelve-jointed?, capitate, porrect, rather thick, nearly cylindrical, a little longer than the head. Thorax gibbous, with a subquadrate-oval, finely punctured, scutelliform spot on the disc in front. Scutellum transverse. Wings large, bare, hyaline; subcostal vein rudimentary; radial ending at much before half the length of the wing; cubital ending at much before two-thirds of the length; subapical proceeding from near the tip of the cubital, ending at the tip of the wing; subanal proceeding from the cubital before half its length; anal and subaxillary distinct, the latter forming an angle. Areolets seven,—the humeral, which is very short, the radial, the cubital, the subapical, the anal, the axillary, and the subaxillary. Posterior margin slightly curved inward near the base. Halteres distinct. Abdomen broad, depressed, with eight segments. Legs rather stout, slightly pubescent; fore coxæ large; fore femora thick or very thick, slightly bristly beneath; fore tibiæ with a rather long apical spine; hinder tibiæ with short apical spurs.

This genus is nearly allied to *Scatopse* in habit and structure.

1. **pullus,** Hal. MSS. Nigra, nitens, thorace pubescente subnitido, alis limpidis, venis apud costam nigris, pedibus testaceis, tibiis posticis apice femoribusque nigris. Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Black, shining. Thorax gibbous, pubescent, slightly shining. Wings limpid; costal, subcostal, and radial veins black; radial vein incrassated at its junction with the costal; the other veins colourless. Legs testaceous; femora black; hind tibiæ with black tips.

Rare. In Mr. Haliday's collection. (I.)

Family V. SIMULIDÆ.

Tipulariæ latipennes, Meig.; Mcq. *Simuliites*, Newm. *Simulides*, Zett. *Simulinæ*, Rondani.

Ocelli nulli. Mesothoracis scutum integrum. Vena costalis ante alæ apicem terminata. Tibiæ et metatarsi lata, compressa.

Ocelli none. Scutum of the mesothorax undivided. Wings and halteres complete. Costal vein ending near the tip of the wing. Tibiæ and metatarsi broad, compressed.

This Family comprises only one genus.

Genus I. **SIMULIUM.**

SIMULIUM, Latr. Hist. Nat. Ins. (1802); Mcq.; Heeger. *Culex* p., L.; F. E. S.; Schr.; Gmel. *Tipula* p., D. G.; F. E. S. *Scatopse* p., F. S. A. *Chironomus* p., F. S. A. *Atractocera*, Meig. Kl. Zw. *Simulia*, Meig.; Fries; Zett.

Corpus parvum, oblongo-ovatum, gibbum, opacum, tomentosum. Caput parvum, thorace angustius et humilius. Ocelli nulli. Palpi 4-articulati, exserti, incurvi; articulus primus parvus; secundus et tertius longiores; quartus adhuc longior, nudus, gracilis, quasi articulatus. Antennæ 11-articulatæ, porrectæ, submoniliformes, subcylindricæ, apices versus subangustatæ, capite nonnihil longiores; articuli primus et secundus discreti; tertius et sequentes contigui, transversi, subcyathiformes. Thorax ovatus. Alæ amplæ, incumbentes, nudæ, hyalinæ. Halteres distincti. Abdomen 8-annulatum, subcylindricum. Pedes validiusculi, compressi, inermes, metatarso postico longiusculo. *Mas.* Corpus plerumque atrum, aureo aut albo ornatum. Oculi magni, rotundi, in fronte arcte contigui. Palpi parvi. Antennæ in fronte antico approximatæ Abdomen subcylindricum, subincurvum. Metatarsus posticus incrassatus. *Fœm.* Corpus plerumque cinerascens. Oculi mediocres, reniformes, remoti. Labrum lanceolatum. Labium lineare, apice rotundatum et bidentatum. Lingua elongata, fissa, apud medium contracta, extus apicem versus ciliata. Palpi majusculi. Antennæ in incisuris ocellorum insertæ, nonnihil remotæ. Abdomen oblongum, crassum, rectum. Metatarsus posticus vix incrassatus.

Body small, oblong-oval, gibbous, opaque, tomentose. Head small, narrower and lower than the thorax. Ocelli none. Palpi four-jointed, exserted, curved downward; first joint small; second and third longer; fourth still longer, slender, bare, composed of numerous little annuli. Antennæ eleven-jointed, porrect, submoniliform, nearly cylindrical, somewhat narrower towards the tips, a little longer than the head; first and second joints remotely connected; third and following closely connected, transverse, nearly cyathiform; eleventh elongate, conical. Thorax oval. Wings ample, incumbent, bare, hyaline; costal, mediastinal, radial, and cubital veins stout; the rest slender, indistinct; costal vein ending at little in front of the tip of the wing; subcostal and mediastinal ending at very little beyond half the length; radial ending at a little before two-thirds of the length; cubital joining the tip of the costal; subapical double, springing from the cubital before half the length of the wing; the first division ending at the tip of the wing, the second joining the hind border; two externo-medial veins,

the first forked towards the tip; subanal vein undulating; anal vein straight; axillary extending nearly to the border. Halteres distinct. Abdomen nearly cylindrical, with eight segments. Legs rather stout, compressed, unarmed; hind metatarsus somewhat lengthened. *Male.* Body generally deep black, adorned with gilded or white tomentum. Eyes large, round, closely connected in front. Palpi small. Antennæ inserted in the anterior front, approximate. Abdomen nearly cylindrical, slightly incurved. Hind metatarsus incrassated. *Fem.* Body generally cinereous. Eyes of moderate size, reniform, remote. Labrum lanceolate. Labium linear, rounded and bidentate at the tip. Lingua divided, elongated, contracted in the middle; apical part ciliated on the outer side. Palpi longer than in the male. Antennæ inserted in notches of the eyes, somewhat remote. Abdomen oblong, thick, straight. Hind metatarsus hardly incrassated.

The female *Simulia* are frequently called Sand-flies, and in some countries and districts are even more annoying and injurious than the gnats or mosquitoes. They abound especially in the most northern parts of Europe, and in several parts of North and South America. In the Bannat the myriads of *S. Colombaschense* often prove fatal not only to cattle but to mankind. The larva of *S. sericeum* is aquatic, cylindrical, rather more slender in the middle; it dwells on the stems of *Phellandrium*, and of *Sium;* the head is distinct, and is furnished, in addition to the trophi, with two short antennæ, and with two flabelliform appendages; the thorax has a thick conical and retractile tubercle beneath, and the tip of the abdomen has several curved appendages. The pupa has on each side of the front of the thorax eight very long filiform appendages; the posterior part of its body is enclosed in a semioval membranous cocoon, attached to the plants, and open in front. The winged insect is developed beneath the surface of the water, from which it is protected by its fine silky covering.

a. Legs with white bands.
  b. Thorax with gilded tomentum. Species 1.
  b b. Thorax without gilded tomentum. Species 2.
a a. Legs without bands.
  b. Thorax with cinereous tomentum.
    c. Thorax not striped. Species 3.
    c c. Thorax striped. Species 4.
  b b. Thorax with hoary tomentum. Species 5.

1. **reptans,** L. F. S. 1893 (1761); F.; Schr.; Gmel.; Latr.; Meig.; Fries; Mcq.; Dahlb.; Zett.—*sericea*, L.; F.; Gmel.; Meig.—*erythrocephala*, D. G.—*florilega?* L.—*maculata?* F.—*argyropeza*, Meig. Kl. Alis limpidis, venis albis apud costam nigricantibus, halteribus luteis, tibiis et metatarsis basi albis; *Mas*, atra, capite antico albo, thorace aureo-tomentoso, lateribus fasciaque antica interrupta albis; *Fœm.* nigra,

cinereo-tomentosa, thorace maculis duabus anticis albis. Long. $1\frac{1}{2}$–$1\frac{3}{4}$; alar. $3\frac{1}{2}$ lin.

Wings limpid; costal, radial, and cubital veins blackish, the rest white. Halteres luteous. Tibiæ and hind tarsi white towards the base. *Male.* Deep black. Head white in front. Thorax with slightly gilded tomentum; sides white; an interrupted white band in front. *Fem.* Black, with cinereous tomentum. Thorax with a large white spot on each side in front.

Generally distributed. (E. S. I.)

2. **elegans,** Meig. Zw. i. 226. 9 (1818). Alis limpidis, venis albis apud costam nigricantibus, halteribus luteis, genubus albidis, tibiis anticis albis apice nigris; *Mas*, atra, thoracis fascia antice interrupta, macula dorsali lateribusque albis, abdominis lateribus albo-trimaculatis; *Fœm.* nigra, cinereo-tomentosa. Long. $1\frac{1}{4}$–$1\frac{1}{2}$; alar. 3 lin.

Wings limpid; costal, radial, and cubital veins blackish, the rest white. Halteres luteous. Knees whitish; fore tibiæ white, black towards the tips. *Male.* Deep black. Thorax with an interrupted white band in front and with a white dorsal spot; sides white. Abdomen with three white spots on each side. *Fem.* Black, with grey tomentum.

Generally distributed. (E. S. I.)

3. **marginata,** Meg.; Meig. Zw. i. 293. 6 (1818). Alis limpidis, venis albis apud costam nigris; *Mas*, atra, thorace antice et inter alas ferrugineo-cinereo, halteribus piceis, abdomine basi subtusque ferrugineo-cinereo, femoribus tibiisque cinereis; *Fœm.* nigra, *corpore femoribus tibiisque cinereo-tomentosis*, halteribus fulvis. Long. $1\frac{1}{2}$–$1\frac{3}{4}$; alar. $3\frac{1}{2}$ lin.

Wings limpid; costal, radial, and cubital veins black, the other veins white. *Male.* Deep black. Thorax with ferruginous-cinereous tomentum in front and between the wings. Halteres piceous. Abdomen with ferruginous-cinereous tomentum at the base and beneath. Femora and tibiæ with cinereous tomentum. *Fem.* Black. *Body, femora, and tibiæ with cinereous tomentum.* Halteres tawny.

Not rare. (E.)

4. **lineata,** Meig. Kl. Zw. i. 95. 2 (1804). *Fœm.* nigra, subcinereo-tomentosa, *thorace vittis quatuor canis*, alis limpidis apud costam fulvis, halteribus albidis. Long. $1\frac{1}{4}$; alar. 3 lin.

Fem. Black, with grey tomentum. *Thorax with four hoary stripes.* Wings limpid; costal, radial, and cubital veins tawny, the other veins white. Halteres whitish.

Not common. (E.)

5. **fuscipes,** Zett. Fries, Monogr. Simul. 18. 6 (1829?); Meig. Zw. vi. 314. 12 (1830); Zett.—var. *pubiventris*, Zett. I. L. *Fœm.* nigra, *cano-tomentosa*, alis limpidis, venis albidis, apud costam nigris, halteribus albidis. Long. $1\frac{1}{4}$; alar. $3\frac{1}{4}$ lin.

Fem. Body and legs black, *with hoary tomentum.* Wings limpid;

costal, radial, and cubital veins black, the other veins white. Halteres whitish.

Not common. (E.)

Family VI. CHIRONOMIDÆ.

Chironomidæ, Haliday, MSS. Brit. Dipt. i. 7. (1851). *Tipulariæ culiciformes* p., Meig.; Mcq.; Winn. *Culicites* p., Newm. *Tipulidæ* p., Leach; Steph. *Chironomii* p., Zett. *Chironominæ* p., Rond.

Ocelli nulli. Mesothoracis scutum integrum, absque sutura transversa. Alæ angustæ, margine postico aveniæ (membrana longius pubescente aut glaberrima); vena costalis apud alæ apicem terminata. Pedes sæpissime tenues, tibiis et tarsis gracilibus, subcylindricis.

Ocelli none. Scutum of the mesonotum undivided. Wings and halteres developed. Wings narrow, without veins along the posterior margin; costal vein ending near the tip of the wing. Legs generally attenuated; tibiæ and tarsi slender, nearly cylindrical.

These flies are usually called Midges; generally inhabit water or watery ground during their larva-state; and some species occur in innumerable multitudes, and their numbers must much contribute to remove or change to earth the decaying vegetable matter, which is their earliest food. The larvæ of a few species dwell beneath the bark of trees.

I am indebted to Mr. Haliday for the characters in the following grouping of the genera:—

a. Proboscis distinct, with (4-) jointed palpi. Metathorax produced over the base of the abdomen.
- *b.* Mesosternum compressed, gibbous, descending as low as the ends of the posterior coxæ.
  - *c.* Wings oblong, with the anal angle more or less abrupt.
    - *d.* Antennæ with twelve joints or more in the male, seven or eight in the female. 1. Chironomus.
    - *d d.* Antennæ fifteen-jointed, plumose in the male, with the penultimate joint elongated. Pobrachial areolet closed externally. 2. Tanypus.
  - *c c.* Wings nearly spatulate, the anal margin being sloped without an angle. 3. Corynoneura.
- *b b.* Metathorax short, descending. Posterior coxæ extending downwards beyond the convex mesosternum. 4. Ceratopogon.

a a. Proboscis and palpi obsolete. Wings coriaceous. 9. Clunio.

Genus I. **CHIRONOMUS.**

Chironomus, Meig. Illig. Mag. (1801); Fabr.; Latr.; Curt.; Mcq.; Zett.; Westw.; Stæg.; Gim. *Tipula* p., L.; F. E. S.; D. G.; Schr. *Tanypus* p., Lam.

Corpus elongatum, mediocre, aut parvum, aut minimum, sæpissime pubescens. Caput parvum, sessile. Oculi reniformes, remoti. Proboscis brevis. Palpi 4-articulati, incurvi, subcylindrici; articulus primus brevissimus; secundus et tertius æquales; quartus longior et gracilior. Antennæ porrectæ, filiformes. Thorax ovatus aut longi-ovatus, antice plus minusve productus. Scutellum mediocre. *Alæ* angustæ, elongatæ, lanceolatæ, deflexæ. Abdomen segmentis 8, gracile. Pedes antici plus minusve elongati. *Mas.* Antennæ plumosæ, 13-articulatæ. *Fœm.* Antennæ verticillato-pilosæ, 6-articulatæ.

Body of moderate size, or small, or very minute. Eyes reniform, broader beneath, separate in both sexes. Mouth not elongated. Palpi four-jointed, prominent, curved, pubescent, nearly cylindrical; first joint very short; second and third of moderate and equal length; fourth a little longer and more slender. Antennæ porrect, filiform, seated in a notch of the eye. Thorax oval or elongate-oval, higher than the head, more or less protuberant in front, very generally with three dark stripes. Scutellum of moderate size. Wings narrow, elongate, lanceolate, deflexed, slightly ciliated along the hind border, generally bare, pubescent in some species; mediastinal vein more than half the length of the wing, not extending to the border; subcostal ending at nearly three-fourths of the length; radial emerging from the præbrachial transverse veinlet, ending at beyond three-fourths of the length; cubital proceeding from the præbrachial transverse veinlet, ending at very little in front of the tip; subapical ending at very little behind the tip; subanal forming a fork of the præbrachial; anal complete; subaxillary obsolete. Areolets eleven,—the humeral, the subcostal, the mediastinal, the radial, the cubital, the præbrachial, the pobrachial, which is not closed as in *Tanypus*, the subapical, one externo-medial, the anal, and the axillary. Posterior margin much excavated, and forming an acute angle at its base. Abdomen with eight segments, slender, more or less exceeding twice the length of the thorax. Legs more or less long and slender, bare or slightly pilose, unarmed; coxæ of moderate size; ungues and onychia very small. Fore legs remote from the others, porrect, their tarsi more or less elongated.

Male. Antennæ thirteen-jointed, as long as the thorax, thickly plumose, the hairs decreasing in length towards the tips; first joint short, cylindrical; second and following joints to the twelfth globose, extremely short; thirteenth filiform, slender, generally as long as the whole of the preceding joints. Wings a little shorter than the abdomen. Abdomen slender, somewhat attenuated; seventh segment flattened, slightly dilated hindward, emarginate at the tip; eighth smaller, oval, depressed, with four little apical appendages, which are curved, somewhat hairy, falcate or nearly filiform; fore tarsi often hairy. *Fem.* Antennæ six-jointed, about half the length of the thorax; second, third, fourth, and fifth oblong or elongate-pyriform, slightly verticillate-pilose; sixth slender, filiform, as long as the fourth and the fifth. Wings as long as the abdomen. Abdomen comparatively short and thick, sub-lanceolate or nearly cylindrical.

The species of this genus are very numerous, and there are probably many British kinds in addition to those here described. They may be often seen hovering in the air in immense swarms, particularly towards evening, and those with delicate colours do not usually appear till near sunset. Some of the species with short fore metatarsi run with great activity; the others are more slow in their movements.

"The larva of *C. plumosus* is abundant in stagnant water, and is named Blood-worm on account of its colour, form, and movements. The head has two ocelli-like points, and two biarticulate palpi. The first thoracic segment has two short pediform tentacles beneath. The anal segment is furnished with two large and four small oval appendages, and there is a pair of long fleshy filaments on each of the two preceding joints. The larva at the bottom of the water forms tortuous tubes, which are composed of particles of decayed leaves."

"The pupa is not enclosed in a case, but is of a greater specific gravity than the water, at the bottom of which it resides until within a few hours of the exclusion of the fly. It has the power of swimming, and by moving the tail alternately backwards and forwards can slowly raise itself to the top of the water. For the extrication of the imago it is necessary that it should remain quietly suspended at the surface; and moreover that the thorax, in which the opening for its exit is to be made, should be at least level with it, and this is precisely what takes place. As soon as it has reached the top it remains suspended there motionless, and its thorax is the highest part of the body, and level with the surface. The middle of the back of the thorax has the property of repelling water, apparently from being covered with some oily secretion. Hence, as soon as the pupa has once forced this part of its body above the surface, the water is seen to retreat from it on all sides, leaving an oval space in the disc, which is quite dry. Just previously to the exclusion of the fly, the dry part of the thorax is seen to split in the middle. The air enters, and forms a brilliant stratum, resembling quicksilver, between the body of the insect and its puparium; and the former, pushing forth its head and fore legs, rests the latter upon the water, and in a few seconds extricates itself wholly from its envelope. The pupa, for respiration, has on each side of the thorax a pencil, consisting of five hairs elegantly feathered, which, when they diverge, forms a beautiful star; its anus also is furnished with a fan-shaped pencil of diverging hairs."

"The grub of *C. stercorarius* inhabits horse-dung, and has a

fleshy leg on the under side of the first segment, which points towards the head, and which it has the power of lengthening or contracting. Its various serpentine contortions also assist it in moving. When removed from the substance which constitutes its food, it is enabled to regain it by leaping. Lying horizontally, it brings the anus near the head, regulating the distance by the length of the leap it means to take; when, fixing it firmly, and then suddenly resuming a rectilinear position, it is carried through the air sometimes to the distance of two or three inches. It appears to have the power of flattening the anal extremity, and even of rendering it concave, by means of which it may probably act as a sucker, and so be more firmly fixable."

This genus may be divided into four principal groups:—

* Præbrachial areolet open.
  † Wings deflected. Antennæ of the male with thirteen joints, of the female with seven joints.
    ‡ Antennæ of the male feathered. Group 1.
    ‡‡ Antennæ of the male with few hairs. Group 2.
  †† Wings incumbent. Antennæ of the male twelve-jointed, feathered; of the female seven-jointed. Group 3.
** Præbrachial areolet closed externally. Group 4.

The species of the first group may be arranged in the following sections:—

A. Fore metatarsus longer than the fore tibia.
  a. Fore metatarsus twice the length of the fore metatibia.
    b. Wings not spotted.
      c. Thorax black or grey. Species 1, 2.
      c c. Thorax green, with three black stripes. Species 3–5.
      c c c. Thorax green, with three testaceous stripes. Species 6–9.
      c c c c. Thorax testaceous or green, not striped. Species 10, 11.
    b b. Wings spotted. Species 12.
  a a. Fore metatarsus longer than the fore tibia by three-fourths.
    b. Thorax black. Species 13–15.
    b b. Thorax green, with three black or brown stripes. Species 16–20.
    b b b. Thorax green, with three testaceous stripes. Species 21–24.
  a a a. Fore metatarsus longer than the fore tibia by two-thirds.
    b. Wings not spotted.
      c. Thorax black, or grey. Species 25, 26.
      c c. Thorax pale, with three black or brown stripes. Species 27–32.
      c c c. Thorax pale, with three luteous stripes.
        d. Abdomen with black bands. Species 33.
        d d. Abdomen without bands. Species 34–40.
      c c c c. Thorax not striped. Species 41, 42.

b b. Wings spotted. Species 43.
a a a a. Fore metatarsus longer than the fore tibia by one-half.
b. Wings banded or spotted. Species 44, 45.
b b. Wings not banded or spotted.
c. Thorax black.—*Note.* In the female of *C. pedellus* the thorax is green, with three black stripes.
d. Abdomen black.
e. Tarsi white towards the base. Species 46.
e e. Tarsi not white towards the base. Species 47–50.
d d. Abdomen green. Species 51, 52.
c c. Body blackish-green. Species 53.
c c c. Thorax brown or grey, with three black stripes. Species 54, 55.
c c c c. Thorax pale, with three black stripes. Species 56–61.
c c c c c. Thorax pale, with three brown stripes. Species 62–64.
c c c c c c. Thorax pale, with three pale stripes. Species 65–73.
c c c c c c c. Thorax pale, not striped. Species 74.
a a a a a. Fore metatarsus longer than the fore tibia by one-quarter.
b. Wings not spotted.
c. Thorax black. Species 75–77.
c c. Thorax piceous. Species 78.
c c c. Thorax grey, with three black stripes. Species 79–81.
c c c c. Thorax pale.
d. Thorax with three black stripes. Species 82, 83.
d d. Thorax with three brown stripes. Species 84, 85.
d d d. Thorax with three pale stripes. Species 86–88.
b b. Wings spotted. Species 89.
a a a a a a. Fore metatarsus longer than the fore tibia by one-fifth.
b. Thorax black. Species 90–94.
b b. Thorax hoary, with three black stripes. Species 95.
b b b. Thorax pale.
c. Thorax with three black or brown stripes. Species 96–103.
a a a a a a a. Fore metatarsus longer than the fore tibia by one-sixth. Species 104.
A A. Fore metatarsus and fore tibia of equal length.
a. Thorax black. Species 105–107.
a a. Thorax pale, with three darker stripes. Species 108–112.
A A A. Fore metatarsus shorter than the fore tibia.
a. Fore tibia longer than the fore metatarsus by one-seventh. Species 113.
a a. Fore tibia longer than the fore metatarsus by one-sixth. Species 114–117.
a a a. Fore tibia longer than the fore metatarsus by one-fifth. Species 118.
a a a a. Fore tibia longer than the fore metatarsus by one-fourth.
b. Thorax black. Species 119–125.
b b. Thorax pale, with three black stripes. Species 126–131.

b b b. Thorax pale, with three darker stripes. Species 132–136.
b b b b. Thorax pale, not striped. Species 137.
a a a a a. Fore tibia longer than the fore metatarsus by one-half.
b. Thorax not prolonged in front.
c. Thorax black or grey, not striped. Species 138–147.
c c. Thorax hoary, with three black stripes. Species 148, 149.
c c c. Thorax pale, with three black or brown stripes. Species 150–153.
c c c c. Thorax pale, not striped. Species 154.
b b. Thorax prolonged in front. Species 155.
a a a a a a. Fore tibia longer than the fore metatarsus by two-thirds.
b. Body black. Species 156–162.
b b. Thorax hoary, with three black stripes. Species 163–167.
b b b. Thorax grey, with three black stripes. Species 168.
b b b b. Thorax with pale stripes; abdomen with pale bands. Species 169–171.
b b b b b. Thorax pale, with three black or brown stripes. Species 172–174.
a a a a a a a. Fore tibia longer than the fore metatarsus by three-fourths.
b. Thorax black, or hoary. Species 175–178.
b b. Thorax pale. Species 179.
a a a a a a a a. Fore tibia twice the length of the fore metatarsus.
b. Body black, or grey. Species 180–185.
b b. Thorax pale, with darker stripes. Species 186–188.

1. **dissidens,** n. *Mas,* niger, thorace subcinereo vittis tribus nigris, alis limpidis, venis subfuscis, halteribus *pedibus*que *testaceis, femoribus, tibiis posterioribus apice, tibiis anticis tarsisque nigricantibus.* Long. 2; alar. 4 lin.

Male. Black. Antennæ with brown plumes. Thorax slightly grey, with three black stripes. Wings limpid, with a blackish mark at the base; veins pale brown; discal transverse veinlet rather darker than the rest. Halteres testaceous. *Legs testaceous; femora, tips of the tibiæ, tarsi, and fore tibiæ blackish.*

Not common. (E.)

2. **punctipes?** Wied. Zool. Mag. i. 1. 65 (1816); Meig.—*bicolor?* Meig. Zw. vii. 7. 134 (1838). *Mas et Fœm.* niger, alis albo-limpidis, venis albicantibus, halteribus abdomineque viridibus, *pedibus pallide testaceis, tibiis apice paullo obscurioribus.* Long. $1\frac{3}{4}$–2; alar. 3–$3\frac{1}{2}$ lin.

Male and Fem. Black. Wings limpid-white; veins whitish. Halteres and abdomen green. *Legs pale testaceous; tips of the tibiæ rather darker. Male.* Antennæ with brown plumes.

Abundant in September. (E. S. I.)

3. **pusillus,** L. S. N. ii. 975 (1767); F.; Gmel.; Meig.; Mcq.; Zett.; Gim.; Stæg. *Mas et Fœm. viridis,* thorace vittis tribus nigris

nonnunquam testaceo, alis limpidis, *venis* pedibusque *pallide testaceis*, tibiis apice femoribusque paullo obscurioribus. Long. $1\frac{1}{2}$–$1\frac{3}{4}$; alar. $2\frac{1}{2}$–3 lin.

Male and Fem. Green. Thorax with three black stripes. *Wings limpid; veins pale testaceous.* Legs pale testaceous; femora and tips of the tibiæ rather darker.—Var. β. Thorax testaceous, with three black stripes. *Male.* Antennæ with brown plumes.

Apparently allied to *C. prasinatus*, Stæg. Common. (E.)

4. **viridulus,** L. S. N. ii. 975 (1767); F.; Gmel.; Meig.; Mcq.; Zett.; Gim.; Stæg. *Mas*, viridis, thorace vittis tribus nigricantibus, *alis* limpidis, *venis albidis apud costam nigricantibus*, halteribus albidis, pedibus testaceis. Long. $1\frac{1}{4}$; alar. 2 lin.

Male. Green. Palpi and antennæ black. Thorax with three blackish stripes. *Wings* limpid; *costal, radial, and cubital veins blackish, the rest whitish.* Halteres whitish. Abdomen pubescent. Legs testaceous, the four posterior very pubescent. *Male.* Antennæ with brown plumes.

Not rare. (E.)

5. **tenuis?** Mcq. H. N. D. i. 52. 19 (1834); Meig. *Mas, niger, thorace cano-viridi vittis tribus latis nigro-cinereis*, alis limpidis, venis pedibusque testaceis, halteribus albidis, tibiis apice fuscis. Long. $1\frac{3}{4}$; alar. 3 lin.

Black. Thorax hoary green, with three broad greyish-black stripes. Wings limpid; veins testaceous. Halteres whitish. Legs testaceous; tips of the tibiæ brown. *Male.* Antennæ with testaceous plumes.

Not common. (E.)

6. **ejuncidus,** n. *Mas*, viridis, thorace vittis tribus testaceis, alis albo-limpidis, venis albidis, halteribus albis, *abdomine fusco valde pubescente*, segmentorum marginibus albis, pedibus albido-testaceis. Long. $1\frac{1}{4}$; alar. 2 lin.

Male. Green. Antennæ with testaceous plumes. Thorax with three testaceous stripes. Wings limpid-white; veins whitish. Halteres white. *Abdomen brown, very pubescent*, with a white band on the hind border of each segment. Legs whitish-testaceous.

Not common. (E.)

7. **brevitibialis?** Zett. Dipt. Scand. ix. 3537. 59 (1850). *Mas, flavido-viridis, thorace vittis tribus testaceis*, alis albo-limpidis, venis halteribusque albis, *abdomine obscure viridi vix pubescente*, pedibus pallide viridibus, tarsis apice nigris. Long. $1\frac{3}{4}$; alar. 3 lin.

Male. Yellowish-green. Palpi and antennæ testaceous, the latter with brown plumes. *Thorax with three testaceous stripes.* Wings limpid-white; veins and halteres white. *Abdomen dark dull green, hardly pubescent.* Legs pale green; tarsi black towards the tips.

Not common. (E.)

8. **rufovittatus?** Stæg. Dipt. Dan. 570. 39 (1840); Zett. *Mas,*

prasinus, thorace vittis tribus luteis, alis albo-limpidis, venis halteribusque albis, *abdomine pallide viridi vix pubescente,* pedibus pallide testaceis. Long. $1\frac{1}{4}$–$1\frac{3}{4}$; alar. 2–3 lin.

Male. Grass-green. Antennæ with testaceous plumes. *Thorax with three luteous stripes.* Wings limpid-white; veins and halteres white. *Abdomen pale green, hardly pubescent.* Legs pale testaceous.

Not rare. (E.)

9. **eminulus,** n. *Fœm. pallide viridis, thorace vittis tribus testaceis,* alis limpidis, venis halteribusque albis, *abdomine vix pubescente,* pedibus albido-testaceis. Long. 1–$1\frac{1}{2}$; alar. 2–3 lin.

Fem. Pale green. Thorax with three testaceous stripes. Wings limpid; veins and halteres white. *Abdomen hardly pubescent.* Legs whitish testaceous.

Not rare. (E.)

10. **ictericus?** Meig. Zw. vi. 253. 103 (1830); Stæg.; Zett. *Fœm.* testaceus, *alis pubescentibus fere limpidis,* venis halteribusque albidis, pedibus pallide testaceis. Long. 1; alar. 2 lin.

Fem. Testaceous. Wings pubescent, nearly limpid; veins and halteres whitish. Legs pale testaceous.

Not common. (E.)

11. **futilis,** n. *Mas, prasinus, alis limpidis,* venis albidis apud costam pallide testaceis, halteribus pedibusque pallide viridibus, tarsis testaceis. Long. $1\frac{3}{4}$; alar. 3 lin.

Male. Grass-green. Wings limpid; costal, radial, and cubital veins pale testaceous, the rest whitish. Halteres pale green. Legs pale green; tarsi testaceous.

Not common. (E.)

12. **scalænus,** Schr. Fn. Boic. iii. 2324 (1798); Meig.; Meq.; Stæg.; Zett. *Fœm.* fuscus, alis limpidis cinereo-trimaculatis, venis halteribusque albidis, pedibus pallide testaceis. Long. $\frac{3}{4}$–1; alar. 2 lin.

Fem. Brown. Wings limpid-white, with three grey spots, the first near the fore border and beyond the middle; the second and third near the hind border, the second before the middle, the third behind the first; veins and halteres whitish. Legs pale testaceous.

Rare. In the British Museum. (E.)

13. **glabricollis?** Meig. Zw. vi. 248. 89 (1830); Stæg.; Zett.—Var.? *Mas,* ater, *alis lacteis,* venis albis, halteribus albidis, abdomine nigro-viridi, pedibus nigricantibus, tibiis tarsisque posterioribus pallide testaceis. Long. $1\frac{1}{2}$; alar. $2\frac{1}{2}$ lin.

Var.? *Male.* Deep black. *Wings milky-white;* veins white. Halteres whitish. Abdomen greenish-black. Legs blackish; posterior tibiæ and tarsi pale testaceous.

Not common. (E.)

14. **notescens,** n. *Mas,* niger, *alis subcinereis, venis* halteribusque

testaceis, pedibus obscure testaceis pubescentibus, femoribus fuscescentibus. Long. $2\frac{1}{4}$; alar. 4 lin.

Male. Black. *Wings slightly greyish; veins* and halteres *testaceous.* Legs dull testaceous, pubescent; femora brownish.

Not rare. (E.)

15. **flavimanus?** Meig. Zw. vi. 246. 80 (1830).—Var.? *Fœm.* nigro-cinereus, *alis subcinereis, venis* testaceis *apud costam fuscis*, halteribus testaceis, pedibus obscure testaceis, tibiis tarsisque anticis femoribusque posterioribus nigricantibus. Long. 2; alar. 4 lin.

Fem. Greyish-black. *Wings slightly greyish; costal, radial, and cubital veins and discal transverse veinlet brown*, the rest testaceous. Halteres testaceous. Legs dark testaceous, rather stout; femora, fore tibiæ, and fore tarsi blackish; fore femora testaceous, blackish towards the tips.

Not common. (E.)

16. **aprilinus?** Hoffm.; Meig. Zw. vi. 245. 78 (1830). *Mas et Fœm.* cano-viridis, thorace vittis tribus nigris, alis limpidis, venis albidis apud costam fuscis, halteribus albis, *abdominis segmentorum marginibus posticis canis*, pedibus testaceis, femoribus, tibiis et tarsorum articulis apice fuscis. Long. $2\frac{1}{2}$; alar. $4\frac{1}{2}$ lin.

Green, with a hoary tinge. Thorax with three black stripes, the middle one double. Wings limpid; costal, radial, and cubital veins and discal transverse veinlet brown, the rest whitish. Halteres white. *Abdomen* black, *with a hoary band on the hind border of each segment.* Legs testaceous; tips of the femora, of the tibiæ, and of the joints of the tarsi brown. *Male.* Antennæ with brown plumes.

Not common. (E.)

17. **flabellatus,** Meig. Zw. i. 51. 70 (1818). *Fœm.* nigro-fuscus, thorace testaceo, vittis tribus latis nigris, *alis subcinereis*, venis testaceis apud costam fuscescentibus, halteribus albis, pedibus obscure testaceis. Long. 2; alar. 4 lin.

Fem. Brownish-black. Thorax testaceous, with three broad black stripes. *Wings greyish;* costal, radial, and cubital veins brownish, the rest testaceous. Halteres white. Legs dark testaceous. *Male.* Antennæ with brown plumes.

Not rare. (E.)

18. **objectans,** n. *Mas*, viridis, *thorace vittis tribus fuscis, alis limpidis, venis albidis apud costam testaceis*, halteribus albis, pedibus testaceis, femoribus tibiisque apice tarsisque fuscis. Long. $2\frac{1}{2}$; alar. $3\frac{1}{2}$ lin.

Male. Green. *Thorax with three brown stripes. Wings limpid; costal, radial, and cubital veins testaceous, the rest whitish.* Halteres white. Legs testaceous; tarsi and tips of the femora and of the tibiæ brown. *Male.* Antennæ with brown plumes.

Not common. (E.)

19. **prasinatus?** Stæg. Dipt. Dan. 568. 26 (1840); Zett. *Mas*, viridis, *thorace vittis tribus nigris, alis limpidis, venis albidis apud costam testaceis*, halteribus albis, pedibus pallide testaceis. Long. $1\frac{1}{2}$; alar. $2\frac{1}{2}$ lin.

Male. Green. Antennæ with blackish plumes. *Thorax with three black stripes. Wings limpid; costal, radial, and cubital veins testaceous, the rest whitish.* Halteres white. Legs pale testaceous.

Not common. (E.)

20. **pusio?** Meig. Zw. vi. 256. 117 (1830). *Mas*, obscure viridis, *thorace vittis tribus nigris, alis limpidis, venis pallide testaceis*, halteribus pallide viridibus, pedibus pallide testaceo-viridibus. Long. $1\frac{3}{4}$; alar. 3 lin.

Male. Dark green. *Thorax with three black stripes. Wings limpid; veins pale testaceous.* Halteres pale green. Legs pale dull testaceous-green.

Not common. (E.)

21. **longipes?** Stæg. Dipt. Dan. 570. 38 (1840); Zett. *Fœm.* viridis, thorace vittis tribus testaceis, *alis* albido-limpidis, *venis* halteribusque albidis, illis *apud costam fuscescentibus, abdomine fusco, segmentorum* marginibus posticis subcanis, pedibus testaceis, tarsis fuscescentibus. Long. $2\frac{1}{4}$; alar. 4 lin.

Var.? *Fem.* Green. Thorax with three testaceous stripes. *Wings* whitish, limpid; *costal, radial, and cubital veins*, and *discal transverse veinlet brownish*, the rest whitish. Halteres whitish. Abdomen pubescent, dark brown; hind borders of the segments slightly hoary. Legs testaceous; tarsi brownish.

Not common. (E.)

22. **perlevis,** n. *Fœm.* viridis, thorace vittis tribus testaceis, *alis subcinereis, venis* albidis *apud costam testaceis*, halteribus albis, abdomine fusco, pedibus pallide testaceis. Long. 1; alar. 2 lin.

Fem. Green. Thorax with three testaceous stripes. *Wings greyish; costal, radial, and cubital veins testaceous*, the rest whitish. Halteres white. Abdomen brown. Legs pale testaceous.

Not common. (E.)

23. **viridis,** Fries, MSS.; Mcq.; H. N. D. i. 52. 21 (1834); Meig.; Stæg.; Zett. *Mas et Fœm.* viridis, thorace vittis tribus testaceis, *alis limpidis, venis* albidis *apud costam testaceis*, halteribus albis, pedibus pallide testaceis, tibiis et tarsorum articulis apice nigricantibus. Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Male and Fem. Green. Thorax with three testaceous stripes. *Wings limpid; costal, radial, and cubital veins testaceous*, the rest whitish. Halteres white. Legs pale testaceous; tips of the tibiæ and of the joints of the tarsi blackish. *Male.* Antennæ with brown plumes.

Generally distributed. (E. S. I.)

24. **nervosus?** Stæg. Dipt. Dan. 567. 25 (1840); Zett. *Fœm.*

pallide viridis, thorace vittis tribus latissimis testaceis, *alis sublimpidis, venis pallide testaceis, halteribus* pallide viridibus, abdomine prasino, pedibus testaceis, femoribus tibiisque posterioribus pallide viridibus. Long. $1\frac{1}{2}$; alar. 3 lin.

Fem. Pale green. Thorax with three very broad testaceous stripes. Pectus testaceous. *Wings nearly limpid; veins pale testaceous.* Halteres pale green. Abdomen grass-green. Legs testaceous; posterior femora and posterior tibiæ pale green.

Not common. (E.)

25. **præcox,** Wied.; Meig. Zw. i. 49. 64 (1818). *Mas et Fœm. niger, thorace cinereo vittis tribus nigris, alis pubescentibus subcinereis, venis* albidis *apud costam testaceis,* halteribus albis, pedibus fuscis aut testaceis, femoribus tibiisque apice tarsisque nigris. Long. $2\frac{1}{2}$–3; alar. 4–$4\frac{1}{2}$ lin.

Male and Fem. Black. Thorax grey, with three black dorsal stripes. Wings pubescent, slightly greyish; costal, radial, and cubital veins testaceous, the rest whitish. Halteres white. Abdomen pubescent. Legs brown or testaceous, long, slender, minutely pubescent; tarsi and tips of the femora and of the tibiæ black. *Male.* Antennæ with black plumes.

Common. Appears in April.

26. **chloris?** Meig. Zw. i. 28. 17 (1818); Mcq.; Stæg. *Fœm. niger, thorace cano-testaceo vittis tribus nigris,* alis albo-limpidis, venis albis apud costam testaceis, halteribus albidis, *segmentorum abdominalium marginibus posticis canis,* pedibus nigricantibus, tibiis posterioribus femoribusque testaceis, apice nigris. Long. $3\frac{1}{2}$; alar. 6 lin.

Fem. Black. Thorax hoary-testaceous, with three black stripes, the middle one double. Pectus hoary. Wings limpid-white; costal, radial, and cubital veins testaceous, the rest white. Halteres whitish. *Hind borders of the abdominal segments hoary.* Legs blackish; femora and posterior tibiæ testaceous, with black tips.

Not common. (E.)

27. **sulphuricollis?** Meig. Zw. vi. 246. 79 (1830). *Fœm. niger, thorace fulvo vittis tribus nigris,* alis limpidis, venis albidis apud costam testaceis, halteribus testaceis apice nigris, pedibus testaceis, femoribus tibiisque et tarsorum articulis apice nigricantibus. Long. 2; alar. 4 lin.

Fem. Black. Thorax tawny, with three black stripes. Wings limpid; costal, radial, and cubital veins testaceous, the rest whitish. Halteres testaceous, with black tips. Legs testaceous; tips of the femora, of the tibiæ, and of the joints of the tarsi, blackish.

Rare. In Mr. Saunders' collection. (E.)

28. **nigroviridis?** Mcq. H. N. D. i. 51. 18 (1834); Meig.; Gim.; Stæg.; Zett. *Mas et Fœm.* viridis, *thorace vittis tribus fuscis,* alis limpidis, venis albis apud costam testaceis, venula discali fusca, halteribus albidis, *abdomine fasciis latis fuscis,* pedibus pallide viridibus, femoribus

tibiisque necnon tarsorum articulis apice nigris. Long. 3–3½; alar. 4–4½ lin.

Male and Fem. Green. Thorax with three brown stripes; metathorax brown. Wings limpid; costal, radial, and cubital veins pale testaceous, the rest white; discal transverse veinlet brown. Halteres whitish. *Abdominal segments with broad brown bands.* Legs pale green; tips of the femora, of the tibiæ, and of the joints of the tarsi black. *Male.* Antennæ with brown plumes.

Not rare. (E.)

29. **debilis?** Meig. Zw. vi. 255. 113 (1830). *Mas et Fœm. testaceus, thorace vittis tribus latis fuscis,* alis subcinereis, venis fuscis, halteribus albis, *abdomine viridi, segmentorum apicem versus marginibus posticis nigris,* pedibus sordide testaceis. Long. 2; alar. 4 lin.

Male and Fem. Testaceous. Palpi and antennæ black. *Thorax with three broad brown stripes.* Wings greyish, pubescent; veins brown. Halteres white. *Abdomen green; hind borders of the segments towards the tip black.* Legs dingy testaceous, long, slender, pubescent.

Not rare. (E.)

30. **vernus?** Meig. Zw. i. 49. 66 (1818); Mcq.; Gim.; Stæg.; Zett. *Mas et Fœm.* niger, *thorace testaceo vittis tribus nigricantibus, alis subcinereis pubescentibus,* venis albidis apud costam subfuscis, halteribus albis, *abdomine* fusco, pedibus sordide testaceis, tibiis tarsisque apice nigris. Long. 2; alar. 4 lin.

Male and Fem. Black. Thorax testaceous, with three blackish stripes. Wings slightly greyish, pubescent; costal, radial, and cubital veins pale brownish, the rest whitish. Halteres white. *Abdomen dark brown,* pubescent. Legs dingy testaceous, very pubescent, long, slender; tips of the tibiæ and of the tarsi black. *Male.* Antennæ with brown plumes.

Not rare. (E.)

31. **lividus?** Meig. Zw. vi. 246. 82 (1830). *Mas et Fœm. viridis, thorace vittis tribus nitidis nigricantibus,* alis albo-limpidis, venis halteribusque albis, *abdominis apice nigro,* pedibus pallide viridibus, femoribus tibiis tarsisque apice nigris. Long. 2½–3; alar. 4–5 lin.

Male and Fem. Green. Thorax with three blackish shining stripes. Wings limpid-white; veins and halteres white. *Abdomen black towards the tip.* Legs pale green, long, slender; tips of the femora, of the tibiæ, and of the tarsi black. *Male.* Plumes of the antennæ brown, whitish towards the base and towards the tips.

Rare. In the British Museum. (E.)

32. **prasinus,** Meig. Zw. i. 22. 4 (1818); Mcq.; Gim.—*intermedius?* Stæg.; Zett. *Mas et Fœm.* viridis, thorace vittis tribus ferrugineis, alis albo-limpidis, venis albis apud costam testaceis, abdominis segmentis nigro-fasciatis, pedibus viridibus, tibiis tarsisque apice nigris. Long. 2½–4; alar. 4–6 lin.

Green. Thorax with three ferruginous stripes. Wings limpid-white,

with a distinct black discal dot; costal, radial, and cubital veins testaceous, the rest white. Abdomen with a black band on each segment; these bands are not, or hardly, apparent in immature specimens. Legs green; tips of the tibiæ black; tarsi testaceous, their joints with black tips. *Male.* Antennæ with brown plumes.

Generally distributed. (E. S. I.)

33. **viridanus?** Mcq. H. N. D. i. 52. 22 (1834); Meig. *Fœm. viridis, thorace vittis tribus luteis, alis limpidis, venis albidis apud* costam testaceis, *abdomine prasino,* halteribus pedibusque pallide viridibus, tibiis et tarsorum articulis apice nigricantibus. Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Fem. Green. Thorax with three luteous stripes. Wings limpid; costal, radial, and cubital veins testaceous, the rest whitish. Halteres pale green. *Abdomen grass-green.* Legs pale green; tips of the tibiæ and of the joints of the tarsi blackish.

Not rare. (E.)

34. **dispessus,** n. *Mas et Fœm. pallide viridis, thorace vittis tribus luteis, alis limpidis, venis albidis apud costam testaceis,* pedibus testaceis, tibiis et tarsorum articulis apice *tarsisque anticis totis nigricantibus.* Long. $2\frac{1}{2}$; alar. 4 lin.

Male and Fem. Pale green. Thorax with three luteous stripes. Wings limpid; costal, radial, and cubital veins pale testaceous, the rest whitish. Halteres pale green. Legs testaceous; tips of the tibiæ, and of the joints of the tarsi, and *the whole of the fore tarsi, blackish.*

Not common. (E.)

35. **parilis,** n. *Mas et Fœm. viridis, thorace vittis tribus pallide testaceis, alis pubescentibus* subcinereis, venis albidis apud costam testaceis, halteribus albis, tibiis et tarsorum articulis apice tarsisque anticis totis nigricantibus. Long. 2–3; alar. 3–4 lin.

Male and Fem. Green. Thorax with three pale testaceous stripes. Wings pubescent, slightly greyish; costal, cubital, and radial veins testaceous, the rest whitish. Halteres white. Legs pale green; tips of the tibiæ, and of the joints of the tarsi, and the whole of the fore tarsi, blackish. *Male.* Antennæ with testaceous plumes.—Var. β. Pale green. Stripes of the thorax almost obsolete.

Common. (E.)

36. **mancus,** n. *Mas, viridis, thorace vittis tribus luteis, alis limpidis, venis albidis,* pedibus testaceis, *femoribus,* tibiis et tarsorum articulis apice *nigricantibus.* Long. $1\frac{3}{4}$; alar. 3 lin.

Male. Green. Antennæ with brown plumes. *Thorax with three luteous stripes. Wings limpid; veins whitish.* Halteres pale green. *Legs* pale testaceous; *tips of the femora,* of the tibiæ, and of the *joints of the tarsi, blackish.*

Not common. (E.)

37. **convictus,** n. *Mas et Fœm. pallide viridis, validiusculus, tho-*

race vittis tribus testaceis, alis albo-limpidis, venis halteribusque *albidis,* tibiis et tarsorum articulis apice nigricantibus. Long. 2; alar. $3\frac{1}{2}$ lin.

Male and Fem. Pale green, rather stout. Thorax with three testaceous stripes. Wings limpid-white; veins and halteres *whitish.* Legs pale green; tips of the tibiæ and of the joints of the tarsi blackish.

Not common. (E.)

38. **testaceus?** Mcq. D. N. i. 198. 16 (1826); Meig.; Stæg.; Zett.—Var.? *Fœm. pallide testaceus, thorace vittis tribus obscurioribus, alis perlimpidis, venis* halteribusque *albis,* femoribus tibiis tarsisque apice obscure testaceis. Long. $1\frac{1}{2}$; alar. 3 lin.

Var.? *Fem. Pale testaceous. Thorax with three slightly darker stripes. Wings quite limpid; veins* and halteres *white.* Legs very pale testaceous; tips of the femora, of the tibiæ, and of the tarsi, darker.

Not common. (E.)

39. **rufovittatus?** Stæg. Dipt. Dan. 570. 39 (1840); Zett.—Var.? *Fœm.* pallide testaceus, *thorace vittis tribus paullo obscurioribus, alis sublimpidis, venis pallide testaceis, segmentorum abdominalium marginibus posticis albidis.* Long. $1\frac{1}{2}$; alar. 3 lin.

Var.? *Fem. Pale testaceous. Thorax with three indistinct slightly darker stripes. Wings nearly limpid; veins pale testaceous. Hind borders of the abdominal segments whitish.*

Not common. (E.)

40. **modicellus,** n. *Fœm. pallide testaceus, alis albo-limpidis,* halteribus pedibusque albis, abdomine viridi. Long. 1; alar. 2 lin.

Fem. Pale testaceous. Wings limpid-white. Halteres and legs white. Abdomen pale green.

Not common. (E.)

41. **affinis,** Steph. MSS.—*pallidulus,* var.? Meig. *Mas et Fœm. pallide luteus, alis limpidis pubescentibus,* venis pallide testaceis, halteribus albis, abdomine viridi, pedibus testaceis. Long. $1\frac{1}{2}$–$1\frac{3}{4}$; alar. 3 lin.

Pale luteous. Wings limpid, pubescent; veins pale testaceous. Halteres white. Abdomen pale green. Legs testaceous, long, slender. *Male.* Antennæ with testaceous plumes. Abdomen luteous towards the tip.

Rare. In the British Museum. (E.)

42. **nubeculosus,** Meig. Zw. i. 32. 37 (1818); Mcq.; Gim.; Stæg.; Zett. *Mas et Fœm.* testaceus, thorace vittis tribus piceis, alis albo-limpidis, venis albis cinereo-limbatis, abdomine nigro, segmentorum marginibus posticis albidis. Long. $2\frac{1}{2}$–3; alar. $3\frac{1}{2}$–4 lin.

Male and Fem. Testaceous. Palpi and antennæ black. Thorax with three piceous stripes. Wings limpid-white, with grey stripes along the veins, or grey, with the discs of the areolets limpid-white; costal, radial, and cubital veins whitish, the rest white. Halteres whitish. Ab-

domen black, pubescent, with a whitish band on the hind border of each segment. Legs testaceous, long, slender.

Not rare. (E.)

43. **gibbus,** F. E. S. iv. 245. 54 (1792); Panz.; Latr.; Meig.; Meq.; Zett.—*flexilis?* L.; Geoff.; F.; Meig. *Fœm.* pallide viridis, thorace vittis tribus luteis, *alis* albo-limpidis *fascia lata cinerea,* abdomine apicem versus nigricante, pedibus albidis, femoribus ex parte tibiisque posticis fuscis. Long. $2\frac{1}{2}$; alar. 5 lin.

Fem. Pale green. Palpi blackish towards the tips. Thorax with three luteous stripes. *Wings* limpid-white, grey at the base, and *with a broad grey band;* veins whitish, brown in the band. Halteres white. Abdomen blackish towards the tip. Legs whitish, long, slender; femora partly brown; hind tibiæ brown.

Rare. In the British Museum.

44. **maculipennis,** Meig. Zw. i. 38. 38 (1818); Gim. *Mas et Fœm.* niger, thorace cano vittis quatuor nigris, *alis* albis, *areolarum discis cinereo-maculatis,* venis albis apud costam testaceis, pedibus sordide testaceis, coxis femoribusque nigricantibus. Long. $2\frac{1}{2}$–3; alar. $3\frac{1}{2}$–4 lin.

Male and Fem. Black. Thorax above hoary, with four slender black stripes. *Wings* white, *with grey oblong spots on the discs of most of the areolets;* costal, radial, and cubital veins pale testaceous, the rest white. Halteres whitish. Abdomen very pubescent. Legs dingy testaceous, long, slender; coxæ and femora blackish.

Not rare. (E.)

45. **albimanus,** Meig. Zw. i. 40. 45 (1818); Meq.; Gim.; Stæg.; Zett.—*annularis,* Meig. Kl. Zw.; Panz. *Mas et Fœm.* niger, nitidus, alis limpidis, venis albidis apud costam nigris, metatarsis anticis necnon tibiis metatarsisque posterioribus albidis, apice nigris. Long. $2\frac{1}{2}$–3; alar. $3\frac{1}{2}$–4 lin.

Male and Fem. Black, shining. Wings limpid; costal, radial, and cubital veins black, the rest whitish. Halteres white. Legs slender, rather long; fore metatarsi white, generally black towards the tips; posterior tibiæ and posterior metatarsi whitish, black towards the tips. *Male.* Antennæ with black plumes.

Generally distributed. (E. S. I.)

46. **vagans?** Meig. Zw. vi. 249. 91 (1830); Stæg.; Ros.; Zett. *Mas,* niger, alis albo-limpidis, venis albidis apud costam testaceis, *pedibus testaceis.* Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Black. Wings limpid-white; costal, radial, and cubital veins pale testaceous, the rest whitish. Halteres and *legs testaceous.* Abdomen very pubescent.

Not common. (E.)

47. **disclusus,** n. *Mas,* niger, alis albo-limpidis, venis albis apud costam testaceis, halteribus *pedibus*que *testaceis, tibiis anticis femoribus-*

que totis, necnon tibiis posterioribus tarsisque apice fuscescentibus. Long. 2½; alar. 4 lin.

Male. Black. Antennæ with black plumes. Wings limpid-white; costal, radial, and cubital veins testaceous, the rest white. Halteres pale testaceous. *Legs testaceous; femora, fore tibiæ, and tips of the tibiæ and of the tarsi, brownish.*

Not common. In Mr. Saunders' collection. (E.)

48. **opacus?** Meig. Zw. vi. 249. 90 (1830). *Mas,* ater, alis albo-limpidis, venis halteribusque albis, *pedibus fuscis.* Long. 1; alar. 2 lin.

Male. Deep black. Antennæ with black plumes. Wings limpid-white; veins and halteres white. *Legs brown.*

Not common. (E.)

49. **albipes?** Zett. Dipt. Scand. ix. 3588. 124 (1850). *Mas et Fœm.* niger, antennis basi flavis, alis pubescentibus sublimpidis, venis *pedibus*que *albidis.* Long. 2–3; alar. 3–4 lin.

Male and Fem. Black. Antennæ pale yellow towards the base. Wings nearly limpid, pubescent; veins whitish. Halteres white. *Legs whitish,* slender. *Male.* Antennæ with black plumes.

Generally distributed. (E. S. I.)

50. **inopertus,** n. *Mas,* niger, alis limpidis, venis albidis apud costam testaceis, *abdomine pedibusque sordide viridibus.* Long. 2; alar. 3 lin.

Male. Black. Antennæ with black plumes. Wings limpid; costal, radial, and cubital veins pale testaceous, the rest whitish. Halteres whitish. *Abdomen and legs dull green.*

Not common. (E.)

51. **pedellus,** D. G. Ins. vi. 146. 17 (1783); Latr.; Meig.; Meq.; Zett.; Gim.; Stæg.—*fuscus,* L.—*littoralis,* Schr.; Geoff.—*cantans,* F.; Meig. Kl. Zw. *Mas et Fœm.* niger, nitidus, alis albo-limpidis, *abdomine viridi apicem versus nigro, pedibus viridibus, femoribus tibiis et tarsorum articulis apice nigris.* Long. 3–4; alar. 4–5 lin.

Male and Fem. Black, shining. Wings limpid-white; veins whitish. Halteres grass-green. *Abdomen grass-green, black towards the tip,* clothed with white pubescence. *Legs pale green; tips of the femora, of the tibiæ, and of the joints of the tarsi, black. Male.* Plumes of the antennæ brown, white towards the tips; fore tibiæ towards the tips, and fore metatarsi towards the base, black. *Fem.* Thorax green, with three black stripes.

Generally distributed. (E. S. I.)

52. **fuscipennis?** Meig. Zw. i. 36. 31 (1818).—Var.? *Fœm.* viridi-niger, nitidus, alis subfuscis basi limpidis, venis halteribusque albidis, his apice nigricantibus, pedibus testaceis, tibiis apice nigris, femoribus anticis nigro-cinctis. Long. 3; alar. 6 lin.

Var.? *Fem.* Greenish-black, shining. Palpi and antennæ testaceous. Wings indistinctly tinged with brown, limpid towards the base; costal,

radial, and cubital veins pale, the rest whitish. Halteres whitish, with blackish tips. Abdomen blackish-green. Legs testaceous, long, slender; tips of the tibiæ black; fore legs very long, their femora with a broad black band towards the tips.

Rare. In the British Museum. (E.)

53. **occipiens,** n. *Mas, fuscus, thorace vittis tribus nigris,* alis subcinereis, venis pedibusque testaceis, halteribus albidis. Long. $3\frac{1}{2}$; alar. $4\frac{1}{2}$ lin.

Male. Brown, shining. Antennæ with black plumes. *Thorax with three black stripes.* Wings very slightly greyish; veins pale testaceous. Halteres whitish. Legs dark testaceous.

Rare. (E.)

54. **annularius,** D. G. Ins. vi. 146. 18 (1783); Latr.; Meig.; Meg.; Mcq.; Zett.; Gim. *Mas et Fœm. cinereus, thorace vittis tribus nigricantibus,* alis sublimpidis, venis albidis apud costam nigris, abdomine nigro, segmentorum marginibus posticis canis, *pedibus testaceis,* tibiis et tarsorum articulis apice nigris. Long. $3\frac{1}{2}$–4; alar. 5–6 lin.

Male and Fem. Grey. Palpi and antennæ black. *Thorax with three blackish stripes.* Wings nearly limpid, slightly ciliated along the hind border; costal, radial, and cubital veins, and discal transverse veinlet black, the rest whitish. Halteres whitish. Abdomen black, pubescent, with a hoary band on the hind border of each segment. *Legs testaceous;* coxæ grey; tips of the tibiæ and of the joints of the tarsi black. *Male.* Antennæ with blackish plumes.

Generally distributed. (E. S. I.)

55. **obnixus,** n. *Mas, niger, thorace fulvo vittis tribus nigris, alis albo-limpidis, venis albis,* halteribus pedibusque testaceis. Long. 2; alar. 3 lin.

Male. Black. Antennæ with blackish plumes. *Thorax tawny, with three black stripes. Wings limpid-white; veins white.* Halteres and legs testaceous; tarsi darker.

Not common. (E.)

56. **brunnipes?** Zett. Dipt. Scand. ix. 3518. 35 (1850). *Mas et Fœm. nigro-fuscus, thorace fulvo vittis tribus nigris, alis sublimpidis, venis testaceis, halteribus albis, pedibus ferrugineis.* Long. $2\frac{1}{2}$–3; alar. 4–$4\frac{1}{2}$ lin.

Male and Fem. Blackish-brown. Thorax tawny, with three very broad black stripes. Wings nearly limpid; veins pale testaceous. Halteres white. Abdomen rather long. Legs ferruginous, long, slender. *Male.* Antennæ with blackish plumes.

Not common. (E.)

57. **pulsus,** n. *Mas et Fœm. obscure viridis, thorace vittis tribus nigris, alis limpidis, venis albis apud costam viridibus,* pedibus viridibus, femoribus tibiis tarsisque apice fuscis. Long. 3–$3\frac{1}{2}$; alar. 4–5 lin.

Male and Fem. Dark green. Thorax with three black stripes. Meta-

thorax black. *Wings limpid; costal, radial, and cubital veins pale green, the rest white.* Halteres white. *Abdomen pubescent.* Legs *pale green,* pubescent; tips of the femora, of the tibiæ and of the tarsi, brown.

Not common. (E.)

58. **tentans,** F. S. A. 38. 3 (1805); Meig.; Mcq.; Gim.; Stæg.; Zett.—*vernalis,* Meig. Kl. Zw. *Mas et Fœm. viridis, thorace vittis tribus nigris, alis albo-limpidis,* venis albis apud costam testaceis, *venula transversa* nigra, *abdominis segmentis nigro-fasciatis,* tibiis et tarsorum articulis apice nigris. Long. 3–4½; alar. 5 lin.

Male and Fem. Green. Thorax with three black stripes, the middle one subdivided. Wings limpid-white; costal, radial, and cubital veins testaceous, the rest white; *discal transverse veinlet black. Abdominal segments with black bands,* which vary in breadth, and occasionally in the middle extend to the hind border, leaving a green spot on each side. Legs pale green; tips of the tibiæ and of the joints of the tarsi black. *Male.* Antennæ with brown plumes. *Fem.* Antennæ testaceous, black towards the tips.

Generally distributed. (E. S. I.)

59. **pallens,** Meig. Zw. i. 22. 5 (1818); Mcq.; Gim.; Stæg.; Zett. *Mas et Fœm. niger, thorace vittis tribus nigricantibus, alis sublimpidis, venis albidis apud costam testaceis, venula transversa nigricante, segmentorum abdominalium marginibus posticis cano-viridibus,* pedibus testaceis, tibiis et tarsorum articulis apice nigris; *Mas, thorace cano; Fœm. thorace viridi.* Long. 3–3½; alar. 4½ lin.

Male and Fem. Black. Thorax with three blackish stripes. Wings nearly limpid; costal, radial, and cubital veins testaceous, the rest whitish; discal transverse veinlet blackish. Halteres green. *Abdomen with a hoary-green band on the hind border of each segment.* Legs testaceous; tips of the tibiæ and of the joints of the tarsi black. *Male.* Antennæ with blackish plumes. *Thorax hoary. Fem. Thorax green.*

Generally distributed. (E. S. I.)

60. **riparius,** Meig. Zw. i. 23. 6 (1818); Mcq.; Gim.; Stæg.; Zett. *Mas et Fœm. nigricans, thorace viridi vittis tribus nigricantibus, alis albo-limpidis, venis albidis apud costam testaceis, venula transversa nigra, segmentorum abdominalium marginibus posticis viridibus,* pedibus viridibus, tibiis et tarsorum articulis apice nigris. Long. 3–3½; alar. 4½ lin.

Male and Fem. Blackish. Thorax green above, with three blackish stripes, the middle one subdivided. *Wings limpid-white; costal, radial, and cubital veins testaceous, the rest whitish; discal transverse veinlet black.* Halteres green. *Abdomen with a green band on the hind border of each segment.* Legs green; tips of the tibiæ, of the joints of the tarsi, and of the fore femora, black.

This may be a variety of the preceding species. Generally distributed. (E. S. I.)

61. **psittacinus?** Meig. Zw. vi. 247. 84 (1830); Stæg.; Zett. *Mas*, pallide viridis, *thorace vittisque tribus nigro-fuscis*, alis limpidis, venis albis, pedibus albidis. Long. $1\frac{1}{4}$; alar. $2\frac{1}{2}$ lin.

Male. Pale green. Antennæ with brown plumes. *Thorax with three blackish-brown stripes.* Metathorax blackish-brown. Wings limpid; veins white. Halteres pale green. Abdomen pubescent. Legs whitish, long, slender.

Not common. (E.)

62. **flaveolus,** Meg.; Meig. Zw. i. 23. 7 (1818); Mcq.; Gim.; Stæg.; Zett.—*flavicollis*, Meig. *Mas et Fœm.* viridis, *thorace vittis tribus ferrugineis, alis albo-limpidis*, venis albis apud costam testaceis, *abdominis segmentis nigro-fasciatis albo-marginatis*, pedibus viridibus, tibiis et tarsorum articulis apice nigricantibus. Long. $3-3\frac{1}{2}$; alar. 4–5 lin.

Male and Fem. Green. Palpi and antennæ black, the latter green towards the base. *Thorax with three ferruginous stripes, the middle one divided.* Wings limpid-white; costal, radial, and cubital veins testaceous, the rest white; discal transverse veinlet black. Halteres whitish. *Abdominal segments with black bands, their hind borders white.* Legs green, slender; tips of the tibiæ and of the joints of the tarsi blackish. *Male.* Antennæ with brown plumes. *Fem.* Abdominal bands darker and broader than those of the male.

Generally distributed. (E. S. I.)

63. **pilipes,** Meg.; Meig. Zw. i. 26. 13 (1818). *Mas*, viridis, *thorace vittis tribus fuscis*, alis limpidis, venis albis apud costam fuscescentibus, *abdominis segmentis fusco-fasciatis*, tibiis et tarsorum articulis apice fuscescentibus. Long. 3; alar. 5 lin.

Green. *Thorax with three brown stripes, the middle one divided.* Wings limpid; costal, radial, and cubital veins brownish, the rest whitish; discal transverse veinlet darker brown. Halteres whitish. *Abdomen very pilose, with brown bands.* Legs pale green, pilose; tips of the tibiæ and of the joints of the tarsi brownish.

Rare. In the British Museum. (E.)

64. **virescens,** Meig. Zw. i. 31. 23 (1818); Gim. *Mas et Fœm. viridis, thorace vittis tribus pallide rufescentibus, alis albo-limpidis*, venis albis apud costam testaceis, *pedibus viridi-albis, tibiis apice tarsisque anticis nigris.* Long. $2\frac{1}{2}-3\frac{1}{2}$; alar. 4–5 lin.

Male and Fem. Green. Thorax with three pale reddish stripes. Wings limpid-white; costal, mediastinal, and cubital veins testaceous, the rest white. Halteres white. *Legs greenish-white; fore tarsi and tips of the tibiæ black. Male.* Antennæ with testaceous plumes.

Not rare. (E.)

65. **malacus,** n. *Mas et Fœm. prasinus, thorace vittis tribus testaceo-viridibus, alis albo-limpidis*, venis halteribusque *albis, tibiis apice tarsisque nigris, horum articulis primo et secundo albis.* Long. $2\frac{1}{2}-3$; alar. 4 lin.

Male and Fem. Grass-green. Thorax with three testaceous-green stripes. Wings limpid-white; veins and halteres white. *Legs pale green, long, slender; tibiæ with black tips; tarsi black; first and second joints white, black towards the tips.*

Not rare. (E.)

66. **imbecilis,** n. *Mas et Fœm.* viridis, thorace vittis tribus luteis, *alis albo-limpidis,* venis albis apud costam testaceis, *pedibus pallide viridibus.* Long. $2\frac{1}{2}$–3; alar. 3–4 lin.

Male and Fem. Green. Thorax with three luteous stripes. Metathorax and pectus luteous. *Wings limpid-white;* costal, radial, and cubital veins pale testaceous, the rest white. Halteres white. Abdomen with white pubescence. *Legs pale green, long, slender. Male.* Antennæ with pale brown plumes.

Not rare. (E.)

67. **dorsalis?** Meig. Zw. i. 25. 10 (1818); Stæg.; Zett. *Mas et Fœm. pallide viridis, thorace vittis tribus luteis, alis limpidis; Mas, abdominis segmentis fusco-fasciatis; Fœm. abdomine fusco, segmentorum marginibus posticis viridibus.* Long. $3\frac{1}{2}$; alar. 5 lin.

Male and Fem. Pale green. Thorax with three luteous stripes, the middle one double. Metathorax brownish. *Wings limpid;* costal, radial, and cubital veins and discal transverse veinlet testaceous, the other veins whitish. Halteres white. Legs pale green, slender; tips of the tibiæ, of the joints of the tarsi, and of the fore femora, and base of the fore tibiæ, blackish. *Male.* Antennæ with brown plumes. *Abdominal segments with brown bands, which are broadest towards the tip. Fem. Abdomen brown; hind borders of the segments pale green.*

Not common. (E.)

68. **paganus?** Meig. Zw. vii. 7. 135 (1838).—Var.? *Mas et Fœm. prasinus, thorace vittis tribus vix conspicuis testaceis, alis albo-limpidis,* venis albis, *tibiis et tarsorum articulis apice nigricantibus.* Long. $2\frac{1}{2}$–$3\frac{1}{2}$; alar. $3\frac{1}{2}$–4 lin.

Var.? *Male and Fem. Grass-green. Thorax with three almost obsolete testaceous stripes. Wings limpid-white;* veins white. Halteres pale green. *Abdomen rather long. Legs pale green, long, slender; tips of the tibiæ and of the joints of the tarsi blackish. Male.* Antennæ with brown plumes.

Not common. (E.)

69. **obreptans,** n. *Fœm. viridis, thorace* vittis tribus luteis, *alis limpidis, venis albidis, femoribus anticis tibiisque apice tarsisque totis nigricantibus.* Long. 2; alar. 4 lin.

Fem. Pale green. Thorax with three luteous stripes. Pectus and metathorax pale luteous. *Wings limpid;* veins whitish. Halteres pale green. Abdomen deep grass-green. *Legs pale green, long, slender; tarsi and tips of the tibiæ and of the fore femora blackish.*

Not common. (E.)

70. **trichopus,** n. *Mas, viridi-testaceus, thorace vittis tribus fulvis, alis limpidis, venis* halteribusque *albidis, abdomine pilosissimo vitta dorsali fulva, pedibus testaceis pilosissimis.* Long. 3; alar. 4 lin.

Male. Greenish-testaceous. Thorax with three tawny stripes. Wings limpid; veins and halteres *whitish. Abdomen very pilose, with a slender tawny stripe. Legs pale testaceous, very pilose.*

Rare. In the British Museum. (E.)

71. **pallidicornis,** Steph. MSS. *Mas et Fœm. pallide viridis, thorace vittis tribus luteis, alis limpidis,* venis albidis apud costam testaceis, halteribus albis, pedibus testaceis. Long. 1–1¼; alar. 2 lin.

Male and Fem. Pale green. Thorax with three pale luteous stripes. Wings limpid; costal, radial, and cubital veins pale testaceous, the rest whitish. Halteres white. *Legs testaceous. Male. Antennæ with testaceous plumes.*

Rare. In the British Museum. (E.)

72. **albidus,** Wied. Meig. Zw. i. 51. 71 (1818). *Mas et Fœm. viridi-albus, thorace vittis tribus fulvis, alis albo-limpidis,* venis albis apud costam stramineis, halteribus albis, *pedibus albidis.* Long. 1¼–1½; alar. 3 lin.

Male and Fem. Greenish-white. Thorax with three tawny stripes. Wings limpid-white; costal, radial, and cubital veins pale straw-colour, the rest white. Halteres white. *Legs whitish,* pubescent, slender, rather long.

Not common. (E.)

73. **tendens,** F. E. S. iv. 243. 47 (1792); Meig.; Mcq.; Gim.; Stæg.; Zett. *Fœm.* testaceus, nitidus, thorace convexiusculo antico subproducto, alis limpidis apud costam subtestaceis, venis halteribusque albidis, segmentorum abdominalium marginibus posticis pallidioribus. Long. 3–4; alar. 6–8 lin.

Fem. Testaceous, shining. Palpi blackish. Thorax rather convex, slightly advanced in front. Wings limpid, with a slight testaceous tinge along the costa; veins and halteres whitish. Hind borders of the abdominal segments pale testaceous. Legs pale testaceous, long, slender.

Not common. (E.)

74. **perennis?** Meig. Zw. vi. 249. 92 (1830). *Mas,* niger, alis limpidis, venis halteribusque albidis, illis apud costam testaceis, *pedibus fuscis.* Long. 1½; alar. 3 lin.

Male. Black. Antennæ with black plumes. Wings limpid; costal, radial, and cubital veins testaceous, the rest whitish. Halteres whitish. *Legs brown,* slender.

Not common. (E.)

75. **discrepans,** n. *Mas,* niger, nitens, alis albo-limpidis, venis albis apud costam testaceis, halteribus albidis, *abdomine viridi, suturis*

apiceque nigricantibus, pedibus viridibus, tibiis et tarsorum articulis apice femoribusque totis nigricantibus. Long. 3½; alar. 6 lin.

Male. Black, shining. Antennæ with black plumes. Wings limpid-white; costal, radial, and cubital veins pale testaceous, the rest white. Halteres whitish. *Abdomen dark green; sutures and three apical segments blackish. Legs dull pale green*, long, slender; femora and tips of the tibiæ and of the joints of the tarsi blackish.

Not common. In the British Museum. (E.)

76. **tarsalis,** Steph. MSS. *Mas*, niger, nitens, alis albo-limpidis, venis halteribusque albis, *abdomine viridi apicem versus nigro, tarsis albis.* Long. 3; alar. 5 lin.

Male. Black, shining. Wings limpid-white; veins and halteres white. *Abdomen pale green, black towards the tip. Legs black*, long, slender; *tarsi white.*

Rare. In the British Museum. (E.)

77. **patens,** n. *Fœm.* piceus, thorace nitente, alis sublimpidis pubescentibus, venis albidis apud costam testaceis, halteribus albis, abdomine fusco, segmentorum marginibus posticis ventreque albidis, pedibus testaceis, femoribus anticis apice subfuscescentibus. Long. 3; alar. 6 lin.

Fem. Piceous. Thorax shining. Wings almost limpid, pubescent; costal, radial, and cubital veins testaceous, the rest whitish. Halteres white. Abdomen brown; hind borders of the segments and underside whitish. Legs testaceous, long, slender; fore femora slightly brownish towards the tips.

Rare. In the British Museum. (E.)

78. **lugubris?** Zett. Dipt. Scand. ix. 3490. 8 (1850). *Mas, niger*, thorace cinereo vittis tribus nigris, *alis* limpidis, *venis* albis *apud costam nigricantibus, venula transversa nigra, halteribus albidis*, segmentorum abdominalium marginibus posticis cinereis. Long. 4; alar. 6 lin.

Male. Black. Antennæ with black plumes. Thorax grey beneath and on each side, and with two slender grey dorsal stripes. Wings limpid; costal, radial, and cubital veins blackish, the other veins white; *discal transverse veinlet black.* Halteres whitish. Abdomen pubescent, with a grey band on the hind border of each segment. Legs slender; posterior tibiæ and tarsi pubescent.

Rare. (E.)

79. **enotatus,** n. *Mas, niger*, thorace cinereo vittis tribus nigris, *alis* sublimpidis, *venis apud costam halteribusque fuscis*, segmentorum abdominalium marginibus posticis canis, pedibus pallide fuscis. Long. 3; alar. 4 lin.

Male. Black. Antennæ with black plumes. Thorax grey, with three black stripes. *Wings* nearly limpid; *costal, radial, and cubital veins, and discal transverse veinlet, brown*, the other veins paler. *Halteres*

brown. Hind borders of the abdominal segments hoary. *Legs pale brown.*

Rare. (E.)

80. **involitans,** n. *Mas, niger,* thorace cinereo vittis tribus nigris, *alis* sublimpidis, *venis halteribusque albidis, illis apud costam testaceis, pedibus pallide fuscis,* tarsis anticis nigricantibus. Long. $3\frac{1}{2}$; alar. $4\frac{1}{2}$ lin.

Male. Black. Thorax grey, with three black stripes. *Wings* almost limpid; *costal, radial, and cubital veins pale testaceous,* the rest whitish. *Halteres whitish.* Abdomen very long. *Legs pale brown,* long, slender; fore tarsi blackish.

Rare. (E.)

81. **convectus,** n. *Mas, niger, thorace testaceo vittis tribus nigris,* alis sublimpidis, venis halteribusque albidis, illis apud costam testaceis, pedibus fuscis, tarsis anticis nigricantibus. Long. 3–4; alar. 5–6 lin.

Male. Black. Antennæ with black plumes. *Thorax above testaceous, with three black stripes.* Wings nearly limpid; costal, radial, and cubital veins pale testaceous, the rest whitish. Halteres whitish. Legs brown, slender; fore tarsi blackish.

Not rare. (E.)

82. **plumosus,** L. F. S. 1756 (1761); F.; Schr.; Gmel.; Latr.; Lam.; Meig.; Mcq.; Gim.; Zett.—*grandis,* Mcg.; Meig. *Mas et Fœm.* cano-testaceus, *thorace vittis tribus nigro-cinereis,* alis sublimpidis, venis halteribusque albidis, illis apud costam nigris, abdomine nigro-cinereo, segmentorum marginibus posticis albidis, pedibus testaceis, tibiis et tarsorum articulis apice nigris. Long. 4–6; alar. 6–7 lin.

Testaceous, with hoary tomentum. Palpi and antennæ black. *Thorax with three blackish-grey stripes.* Wings nearly limpid, with a distinct black discal dot, slightly ciliated along the hind border; costal, radial, and cubital veins black, the rest whitish. Halteres whitish. *Abdomen blackish-grey,* pubescent, *with a whitish band on the hind border of each segment.* Legs testaceous; coxæ hoary; tips of the tibiæ and of the joints of the tarsi black. *Male.* Antennæ with brown plumes.

Generally distributed. (E. S. I.)

83. **littorellus?** Meig. Zw. i. 26. 12 (1818); Gim. Var.? *Mas, viridis, thorace vittis tribus fuscis,* alis limpidis, venis halteribusque albis, illis apud discum testaceis, abdomine fuscescente, segmentorum marginibus posticis albidis, pedibus testaceis, femoribus tibiis et tarsorum articulis apice fuscis. Long. $2\frac{1}{2}$; alar. 3. lin.

Var.? *Green. Thorax with three brown stripes,* the middle one double. Pectus and metathorax brown. Wings limpid; costal, radial, and cubital veins, and discal transverse veinlet, pale testaceous, the other veins white. Halteres white. Abdomen brownish; hind borders of the segments whitish. Legs pale testaceous; tips of the femora, of

the tibiæ, and of the joints of the tarsi, brown. *Male.* Antennæ with brown plumes.

Not common. In the British Museum. (E.)

84. **cingulatus,** Steph. MSS.—*modestus?* Meig.; Stæg.; Zett. *Mas, testaceus, thoracé vittis tribus pallide fuscis,* alis sublimpidis pubescentibus, venis albidis apud costam testaceis, abdomine fusco, segmentorum marginibus posticis albidis. Long. 2; alar. 3 lin.

Male. Testaceous. Thorax with three pale brown stripes. Wings nearly limpid, pubescent; costal, radial and cubital veins testaceous, the rest whitish. Abdomen brown, very pilose, with a whitish band on each segment. Legs testaceous, slender, pubescent.

Rare. In the British Museum.

85. **ferrugineo-vittatus?** Zett. Dipt. Scand. ix. 3492. 10 (1850); Zett. *Fœm.* var.? *viridis,* thorace vittis tribus ferrugineis, *alis* limpidis, venis albis apud costam testaceis, venula transversa fusca, *abdomine nigro, segmentorum marginibus posticis viridibus, pedibus fulvis validiusculis, femoribus tibiis* et tarsorum articulis apice nigris. Long. 2½–3; alar. 4–5 lin.

Fem. Var.? *Green.* Palpi and antennæ black. Thorax with three pale ferruginous stripes. Wings limpid; discal transverse veinlet pale brown; costal, radial, and cubital veins testaceous, the rest white. Halteres whitish. *Abdomen black; hind borders of the segments green. Legs tawny,* minutely pubescent, *rather stout; tips of the femora, of the tibiæ, and of the joints of the tarsi, black.*

Not rare. (E.)

86. **nigrimanus,** Stæg.; Dipt. Dan. 566. 21 (1840); Zett. *Fœm. viridis,* thorace vittis tribus rufis, alis albo-limpidis, venis albis apud costam testaceis, *segmentorum abdominalium marginibus posticis albidis, pedibus pallide viridibus, tarsis testaceis, femoribus anticis apice necnon tibiis tarsisque anticis totis fuscis.* Long. 3–3½; alar. 5–6 lin.

Fem. Green. Thorax with three red stripes. Wings limpid-white; costal, radial, and cubital veins testaceous, the rest white. Halteres pale testaceous. *Hind borders of the abdominal segments whitish. Legs pale green; tarsi testaceous; fore tibiæ, fore tarsi, and tips of the fore femora, brown.*

Not common. (E.)

87. **irretitus,** n. *Mas. et Fœm. albido-viridis,* thorace vittis tribus testaceis, alis albo-limpidis, venis halteribusque albis, *tarsis anterioribus tibiisque apice nigris.* Long. 2–2½; alar. 3–4 lin.

Male and Fem. Whitish-green. Thorax with three pale testaceous stripes. Wings limpid-white; veins and halteres white. Abdomen pubescent. *Legs greenish-white, slender; tibiæ and anterior tarsi with black tips.*

Not common. (E.)

88. **sticticus,** F. Sp. Ins. ii. 407. 38 (1791); Gmel.; Meig.; Meq.;

Gim.; Zett.—*histrio*, F.; Meig.—*pictulus*, Hoffm.; Meig.; Zett. *Mas et Fœm.* niger, thorace cano vittis tribus nigris, alis albis maculis tribus cinereis, venis albis apud costam testaceis, venula transversa nigra, segmentorum abdominalium marginibus posticis albis, pedibus albidis, femoribus fuscescentibus, tibiis et tarsorum articulis apice nigris, his basi fasciaque nigris. Long. 3; alar. 5 lin.

Black. Thorax hoary, with three black dorsal stripes. Wings white, with a black discal dot, and with three pale grey spots in the disc of the areolets, two along the hind border, one towards the tip; costal, radial and cubital veins pale testaceous, the rest white. Halteres whitish. Abdomen with a white band on the hind border of each segment. Legs whitish, pubescent; tips of the femora, of the tibiæ, and of the joints of the tarsi, black; femora brownish for three-fourths of the length from the base; tibiæ black at the base, and with a black band. *Male.* Antennæ with black plumes.

Common. (E. S. I.)

89. **lucidus?** Zett. I. L. 810. 5 (1837). *Mas et Fem.* niger, *alis limpidis, venis albidis apud costam fuscis*, halteribus testaceis, *pedibus nigro-fuscis.* Long. 3–4; alar. 6 lin.

Male and Fem. Black. *Wings limpid; costal, radial and cubital veins brown, the rest whitish.* Halteres pale testaceous. *Legs blackish-brown*, long, slender. *Male.* Antennæ with black plumes.

Not rare. (E.)

90. **leucopus?** Meig. Zw. vi. 249. 93 (1830).—*nigrinus?* Mcq. *Mas*, niger, *alis albo-limpidis, venis albidis apud costam testaceis*, halteribus albis, *pedibus testaceis, femoribus, tibiis et tarsorum articulis apice fuscis.* Long. 3½; alar. 5 lin.

Male. Black. Antennæ with blackish plumes. *Wings limpid-white; costal, radial and cubital veins pale testaceous, the rest whitish.* Halteres white. *Legs pale testaceous*, long, slender, pubescent; *tips of the femora, of the tibiæ, and of the joints of the tarsi, brown.*

Rare. (E.)

91. **carbonarius,** Meig. Zw. i. 40. 43 (1818); Gim. *Mas et Fœm.* niger, *alis albo-limpidis, venis* halteribusque *albidis*, illis apud costam testaceis, pedibus fuscis. Long. 3–4; alar. 5–6 lin.

Black. *Wings limpid-white; costal, radial and cubital veins pale testaceous, the rest whitish.* Halteres whitish. *Legs brown*, long, slender. *Male.* Antennæ with black plumes.

Nearly allied to *C. lucidus*, but more slender; abdomen longer. Common. (E. S. I.)

92. **morulus,** n. *Mas.* niger, nitens, *alis limpidis, venis halteribusque albidis, illis apud costam testaceis, pedibus nigro-fuscis, tibiis testaceis basi nigro-fuscis, femoribus anticis basi testaceis.* Long. 3; alar. 5 lin.

Male. Black, shining. Antennæ with black plumes. *Wings limpid; costal, radial, and cubital veins testaceous, the rest whitish.* Halteres

whitish. *Legs blackish-brown; tibiæ testaceous, blackish-brown towards the base; fore femora testaceous at the base.*

Rare. In Mr. Saunders' collection. (E.)

93. **patibilis,** n. *Mas et Fœm.* niger, robustus, *alis limpidis, venis* halteribusque *albidis, pedibus nigro-fuscis.* Long. 2; alar. 3 lin.

Black, stout. *Wings limpid; veins* and halteres *whitish. Legs blackish-brown,* moderately long and slender. *Male.* Antennæ with black plumes.

Not common. (E.)

94. **nemoralis?** Zett. Dipt. Scand. ix. 3498. 15 (1850). *Fœm.* var.? canus, thorace vittis tribus nigris, alis sublimpidis, venis albidis apud costam testaceis, venula transversa nigra, halteribus albidis, abdomine nigro-cinereo, segmentorum marginibus posticis canis, pedibus testaceis, femoribus tibiisque apice fuscis, tarsis fuscis basi testaceis. Long. 4; alar. 6 lin.

Fem. Var.? Black. Thorax hoary, with three black stripes. Wings nearly limpid; costal, radial, and cubital veins testaceous, the rest whitish; discal transverse veinlet black. Halteres whitish. Abdomen greyish-black; hind borders of the segments hoary. Legs testaceous, long, slender; tips of the femora and of the tibiæ brown; tarsi brown, testaceous at the base.

Rare. (E.)

95. **obvius,** n. *Mas, niger, valde robustus, thorace ferrugineo vittis tribus latissimis nigris,* alis limpidis, *venis* halteribusque *albidis,* illis apud costam testaceis, pedibus fuscis validis. Long. 2½; alar. 4 lin.

Male. Black, very stout. Antennæ with black plumes. *Thorax ferruginous, with three very broad black dorsal stripes.* Wings limpid; costal, radial, and cubital veins testaceous, the rest whitish. Halteres whitish. Legs brown, stout, of moderate length.

Rare. (E.)

96. **littorellus?** Meig. Zw. i. 26. 12 (1830); Stæg.; Zett. *Mas et Fœm. niger, thorace testaceo vittis tribus nigris,* alis limpidis, venis halteribusque albidis, his apud costam testaceis, *segmentorum abdominalium marginibus posticis testaceis,* pedibus testaceis, femoribus tibiisque apice fuscis, tarsis fuscis basi testaceis, tibiis anticis basi fuscis. Long. 3; alar. 6 lin.

Male and Fem. Black. Thorax testaceous, with three black stripes. Wings limpid; costal, radial, and cubital veins testaceous, the rest whitish. Halteres whitish. *Hind borders of the abdominal segments testaceous.* Legs testaceous, long, slender; tips of the femora and of the tibiæ brown; tarsi brown, testaceous towards the base; fore tibiæ brown at the base. *Male.* Antennæ with brown plumes.

Not rare. (E.)

97. **impar,** n. *Mas et Fœm. niger,* nitens, *thorace ferrugineo vittis*

tribus nigris, alis subcinereis, venis albidis apud costam fuscis, halteribus testaceis, *abdomine ferrugineo*, pedibus fulvis, tibiis posterioribus femoribus et tarsorum posteriorum articulis apice, necnon tibiis tarsisque anticis totis nigris; *Mas*, abdomine vitta dorsali nigra. Long. $2\frac{1}{2}$–3; alar. 4–5 lin.

Black, shining. *Thorax ferruginous, with three black stripes.* Wings slightly greyish; costal, radial, and cubital veins brown, the rest whitish. Halteres testaceous. *Abdomen ferruginous.* Legs tawny; fore tibiæ, fore tarsi, tips of the femora, of the posterior tibiæ, and of the joints of the posterior tarsi, black. *Male.* Antennæ with blackish plumes. *Abdomen with a black dorsal stripe.*

Rare. In the British Museum. (E.)

98. **albipennis,** Meig. Zw. vi. 248. 87 (1830); Stæg.; Ros.; Zett. *Fœm. piceus, thorace testaceo vittis tribus latis piceis*, alis limpidis, venis albidis apud costam testaceis, halteribus testaceis, pedibus testaceis, tibiis tarsisque apice fuscescentibus. Long. $3\frac{1}{2}$; alar. 6 lin.

Fem. Piceous. Thorax testaceous, with three broad piceous stripes, which are almost confluent. Wings limpid; costal, radial, and cubital veins, and discal transverse veinlet, pale testaceous, the other veins whitish. Halteres testaceous. Legs testaceous, long, slender; tips of the tibiæ and of the tarsi brownish.

Not common. (E.)

99. **stramineipes?** Zett. I. L. 810. 4 (1840). *Fœm.* var.? *testaceus, thorace vittis tribus nigris*, alis albo-limpidis, venis halteribusque albidis, *abdomine fusco-testaceo*, segmentorum marginibus posticis albidis, pedibus testaceis, femoribus tibiis et tarsorum articulis apice fuscis. Long. 3; alar. 6 lin.

Fem. Var.? *Testaceous. Thorax with three black stripes.* Wings limpid-white; veins and halteres whitish. *Abdomen brownish-testaceous; hind borders of the segments whitish.* Legs testaceous; tips of the femora, of the tibiæ, and of the joints of the tarsi, brown.

Rare. In Mr. Saunders' collection. (E.)

100. **incoactus,** n. *Mas, testaceus, thorace vittis tribus nigris*, alis sublimpidis, venis halteribusque albidis, his apud costam testaceis, pedibus pallide testaceis, tibiis tarsisque apice obscurioribus. Long. 2; alar. 3 lin.

Male. Dark testaceous. Thorax with three black stripes. Metathorax blackish. Wings almost limpid; costal, radial, and cubital veins, and discal transverse veinlet, testaceous, the other veins whitish. Halteres whitish. Legs pale testaceous; tips of the tibiæ and of the tarsi darker. *Male.* Antennæ with brown plumes.

Not common. (E.)

101. **conversus,** n. *Mas et Fœm. pallide testaceus, thorace vittis tribus fuscis*, alis limpidis, venis halteribusque albidis, his apud costam

testaceis, femoribus tibiisque apice tarsisque totis fuscis. Long. $1\frac{1}{2}$; alar. 3 lin.

Male and Fem. Pale testaceous. Thorax with three brown stripes. Metathorax black. Wings limpid; costal, radial, and cubital veins, and discal transverse veinlet testaceous, the other veins whitish. Halteres whitish. Legs pale testaceous; tarsi and tips of the femora and of the tibiæ brown.

Not common. (E.)

102. **zonarius,** n. *Mas, viridis, thorace vittis tribus fuscis,* alis limpidis, venis albidis apud costam testaceis, halteribus albis, *abdominis segmentis fusco-fasciatis,* pedibus viridibus, femoribus tibiis et tarsorum articulis apice nigris. Long. $2\frac{1}{2}$; alar. 3 lin.

Male. Green. Antennæ with brown plumes. *Thorax with three brown stripes, the middle one double.* Pectus and metathorax brownish. Wings limpid; costal, radial, and cubital veins pale testaceous, the rest whitish. Halteres white. *Abdomen with brown bands, which occupy nearly the whole of the three apical segments.* Legs pale green; tips of the femora, of the tibiæ, and of the joints of the tarsi, black.

Rare. In the British Museum. (E.)

103. **rufipes,** L. F. S. 439. 1778 (1761); F.; Meig.; Stæg.; Zett.—*bifasciatus,* Meig.; Meq. Niger, nitens, alis albidis fascia lata fusca, abdominis segmentis fulvo-fasciatis, pedibus testaceis, tibiis et tarsorum articulis apice nigris, tarsis anticis nigris basi testaceis. Long. $3-3\frac{1}{2}$; alar. 5–6 lin.

Black, shining, stout. Wings whitish, with a broad brown band a little before the middle, nearly evanescent towards the hind border; costal, radial, and cubital veins testaceous, the rest whitish. Halteres testaceous. Abdomen pubescent, with a tawny band on each segment. Legs testaceous, stout; tips of the tibiæ and of the joints of the tarsi black; fore tarsi black, excepting the metatarsus. *Male.* Antennæ with brown plumes. Legs partly pubescent.

Rare. In the British Museum. (E.)

104. **intextus,** n. *Mas, niger,* gracilis, alis albo-limpidis, venis halteribusque albis, *pedibus pallide fuscis.* Long. $3\frac{1}{2}$; alar. 4 lin.

Male. Black, slender. Antennæ with black plumes. Wings limpid-white; veins and halteres white. Abdomen very long. *Legs pale brown,* slender.

Not common. (E.)

105. **oppetitus,** n. *Mas, niger,* alis albo-limpidis, venis albidis apud costam testaceis, venula transversa nigra, segmentorum abdominalium marginibus posticis albidis, *pedibus testaceis, femoribus tibiis et tarsorum articulis apice nigricantibus.* Long. 3; alar. 5 lin.

Male. Black. Antennæ with black plumes. Wings limpid-white; costal, radial, and cubital veins testaceous, the other veins whitish; discal transverse veinlet black. Halteres testaceous. *Abdomen* pubes-

cent, *with a whitish band on the hind border of each segment. Legs dark testaceous; tips of the femora, of the tibiæ, and of the joints of the tarsi, blackish.*

Rare. (E.)

106. **marcidus,** n. *Mas, niger,* alis limpidis, venis albidis apud costam testaceis, halteribus albis, *pedibus testaceis.* Long. 2; alar. 3 lin.

Male. Black. Antennæ with black plumes. Wings limpid; costal, radial, and cubital veins pale testaceous, the rest whitish. Halteres white. Abdomen very pubescent. *Legs* slender, *pale dull testaceous.*

Rare. (E.)

107. **obvertens,** n. *Mas et Fœm. viridis, thorace vittis tribus rufescentibus, alis albo-limpidis,* venis halteribusque albis, illis apud costam testaceis, venula transversa fuscescente, pedibus testaceis, femoribus tibiis et tarsorum articulis apice nigris. Long. $2\frac{1}{2}$–3; alar. 5 lin.

Male and Fem. Green. Thorax with three pale reddish stripes. Wings limpid-white; discal transverse veinlet brownish; costal, radial, and cubital veins pale testaceous, the rest white. Halteres white. Legs testaceous, long, slender; tips of the femora, of the tibiæ, and of the joints of the tarsi, black.

Not common. (E.)

108. **convestitus,** n. *Mas, niger, thorace ferrugineo vittis tribus nigris,* alis cinereis, *venis* albidis *apud costam fuscis,* pedibus ferrugineis. Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Black. Antennæ with blackish plumes. *Thorax ferruginous, with three black stripes.* Pectus hoary. *Wings grey; costal, radial, and cubital veins brown,* the rest whitish. Halteres white. Abdomen pubescent. Legs ferruginous.

Rare. (E.)

109. **perreptans,** n. *Mas, niger, thorace vittis tribus virescentibus,* alis sublimpidis, venis albis apud costam nigris, halteribus albidis, abdomine viridi suturis nigris, pedibus viridibus, femoribus tibiisque apice tarsisque nigris. Long. 3; alar. 5 lin.

Male. Black. Antennæ with black plumes. *Thorax with three greenish stripes.* Wings nearly limpid; costal, radial, and cubital veins, and discal transverse veinlet black, the rest white. Halteres whitish. Abdomen dingy green; sutures black. Legs dingy green, slender; tarsi and tips of the femora and of the tibiæ black.

Not common. (E.)

110. **hebescens,** n. *Fœm. testaceo-viridis, subcanescens, thorace vittis tribus cinereis,* alis albo-limpidis, venis halteribusque albidis, illis apud costam testaceis, venula transversa fusca, abdomine pedibusque viridibus, tarsorum articulis apice fuscis. Long. $3\frac{1}{2}$; alar. 6 lin.

Fem. Testaceous-green, with a slight hoary tinge. Thorax with three grey stripes. Metathorax mostly grey. Wings limpid-white; costal, radial, and cubital veins pale testaceous, the rest whitish; discal trans-

verse veinlet brown. Halteres whitish. Abdomen pale green, pubescent. Legs pale green, slightly pubescent; joints of the tarsi with brown tips.

Rare. In the British Museum. (E.)

111. **lentulus,** n. *Mas et Fœm. testaceus, thorace vittis tribus nigris,* alis limpidis, venis halteribusque albis, illis apud costam testaceis, *abdomine nigro-viridi,* pedibus fulvis. Long. 3–3½; alar. 5–6 lin.

Male and Fem. Testaceous. Palpi and antennæ black. *Thorax with three black stripes.* Wings limpid; costal, radial, and cubital veins testaceous, the rest white. Halteres white. *Abdomen greenish-black, with whitish pubescence.* Legs tawny, minutely pubescent.

Not common. (E.)

112. **perpessus,** n. *Mas,* niger, alis sublimpidis, venis halteribusque albidis, illis apud costam testaceis, pedibus fuscis, tarsis nigricantibus. Long. 3½; alar. 6 lin.

Male. Black. Antennæ with black plumes. Wings nearly limpid; costal, radial, and cubital veins pale testaceous, the rest whitish. Halteres whitish. Legs brown, slender; tarsi blackish.

Rare. (E.)

113. **dolens,** n. *Mas, niger,* alis albidis, venis albidis apud costam testaceis, venula transversa halteribusque fuscis, *pedibus fuscis subpilosis,* tibiis tarsisque anticis pilosissimis. Long. 4; alar. 6 lin.

Male. Black. Antennæ with black plumes. Wings whitish; costal, radial, and cubital veins testaceous, the rest whitish; discal transverse veinlet dark brown. Halteres brown. Abdomen long, very hairy. *Legs brown,* long, slender, *slightly hairy; fore tibiæ and fore tarsi very hairy.*

Rare. In the British Museum. (E.)

114. **mœrens,** C. D. B. M. i. 18 (1848). *Mas, niger, valde robustus* et pilosus, alis albidis basi nigricantibus, venis albis apud costam albidis, venula transversa pallide fusca, halteribus fuscis, *pedibus ferrugineis pilosissimis.* Long. 4; alar. 6 lin.

Male. Black, very stout, very hairy. Antennæ with black plumes. Wings whitish, blackish at the base; costal, radial, and cubital veins whitish, the rest white; discal transverse veinlet pale brown. Halteres brown. *Legs ferruginous, very hairy.*

Rare. In the British Museum. (E.)

115. **irritus,** n. *Mas, niger,* alis sublimpidis, venis albidis, halteribus albis, pedibus fuscis. Long. 1¼; alar. 2 lin.

Male. Black. Antennæ with black plumes. Wings almost limpid; veins whitish. Halteres white. *Legs brown,* slender.

Rare. (E.)

116. **variabilis?** Stæg. Dipt. Dan. 571. 44 (1840); Zett.—*geniculatus?* Meig. *Mas et Fœm. niger, thorace sordide testaceo vittis tribus*

latis fere contiguis nigris, alis subcinereis, venis albidis apud costam nigris, halteribus albis, *abdomine nigro-fusco, pedibus fuscis, tarsis nigris.* Long. 2–2½; alar. 4 lin.

Male and Fem. Black. Thorax above dingy testaceous, with three broad almost confluent black stripes. Wings slightly greyish; costal, radial, and cubital veins, and discal transverse veinlet black, the rest whitish. Halteres white. *Abdomen brownish-black*, not pubescent. *Legs brown*, long, slender; *tarsi black. Male.* Antennæ with black plumes.

Not common. (E.)

117. **intrudens,** n. *Mas et Fœm.* niger, thorace fulvo vittis tribus nigris, alis subcinereis, venis albidis apud costam fuscescentibus, halteribus testaceis, pedibus ferrugineis, tibiis anticis tarsisque nigricantibus. Long. 3–3½; alar. 5–6 lin.

Male and Fem. Black. Thorax tawny, with three black stripes. Wings slightly greyish; costal, radial, and cubital veins, and discal transverse veinlet brownish, the other veins whitish. Halteres testaceous. Legs ferruginous; tarsi and fore tibiæ blackish. *Male.* Antennæ with black plumes.

Not rare. (E.)

118. **pervulsus,** n. *Mas, niger*, validiusculus, *alis limpidis* basi nigricantibus, venis et halteribus albidis, pedibus obscure fuscis sat robustis. Long. 1¼–2; alar. 2½–4 lin.

Male. Black, rather stout. Antennæ with black plumes. *Wings limpid*, blackish at the base; veins and halteres whitish. *Legs dark brown*, rather stout.

Not common. (E.)

119. **inscendens,** n. *Mas et Fœm. niger*, validiusculus, *alis albo*-limpidis, venis et halteribus albis, *tibiis posterioribus albidis basi apiceque nigris.* Long. 2½; alar. 4 lin.

Male and Fem. Black, rather stout. *Wings limpid-white;* veins and halteres white. *Legs* moderately long; *posterior tibiæ whitish, black at the base and at the tips. Male.* Antennæ with black plumes.

Not common. (E.)

120. **excerptus,** n. *Mas, niger, alis subcinereis, venis* albidis *apud costam fuscis*, halteribus testaceis, *femoribus piceis basi testaceis.* Long. 1½; alar. 2½ lin.

Male. Black. Antennæ with black plumes. *Wings slightly greyish; costal, radial, and cubital veins, and discal transverse veinlet brown*, the other veins whitish. Halteres testaceous. *Legs black; femora piceous, testaceous at the base.*

Rare. (E.)

121. **nactus,** n. *Mas, niger, alis subcinereis, venis albidis*, halteribus albis, *pedibus nigricantibus.* Long. 1½–2; alar. 2½–3 lin.

Male. Black. Antennæ with black plumes. *Wings greyish; veins*

whitish. Halteres white. Abdomen long, slender. *Legs blackish,* long, slender.

Rare. (E.)

122. **oblidens,** n. *Mas, ater, alis subcinereis, venis* albidis *apud costam nigricantibus.* Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Deep black. Antennæ with black plumes. *Wings slightly greyish; costal, radial, and cubital veins blackish,* the rest whitish. Legs rather long and slender.

Rare. (E.)

123. **effusus,** n. *Mas et Fœm. niger, alis sublimpidis,* venis albidis apud costam testaceis, halteribus fuscis, abdomine nigro-fusco, *pedibus obscure testaceis.* Long. $1–1\frac{1}{4}$; alar. 2 lin.

Male and Fem. Black. Wings nearly limpid; costal, radial and cubital veins pale testaceous, the rest whitish. Halteres brown. Abdomen dark brown. *Legs dull testaceous,* pubescent. *Male.* Antennæ with brown plumes.

Not rare. (E.)

124. **fuscipes,** Meig. Zw. i. 49. 65 (1818); Mcq.; Stæg.; Ros.; Zett. *Mas, niger, alis subcinereis pubescentibus, venis albidis,* halteribus albis, *pedibus fuscescentibus.* Long. 1; alar. $1\frac{3}{4}$ lin.

Male. Black. Antennæ with black plumes. *Wings slightly greyish, pubescent; veins whitish.* Halteres white. *Legs brownish.*

Rare. In the British Museum. (E.)

125. **venosus?** Meig. Zw. vi. 253. 105 (1830). *Mas, niger, thorace vittis tribus testaceis, alis sublimpidis, venis halteribusque albidis, illis apud costam nigricantibus, segmentorum abdominalium marginibus posticis fulvis,* pedibus sordide testaceis, femoribus tibiis et tarsorum articulis apice nigris. Long. 2–3; alar. $4–4\frac{1}{2}$ lin.

Male. Black. Antennæ with black plumes. *Thorax testaceous on each side, and with three very slender testaceous stripes. Wings nearly limpid; costal, radial, and cubital veins, and discal transverse veinlet blackish, the other veins whitish.* Halteres whitish. *Abdomen with a tawny band on the hind border of each segment,* clothed with whitish down. Legs dingy testaceous; tips of the femora, of the tibiæ, and of the joints of the tarsi black.

Not rare. (E.)

126. **incomptus,** n. *Mas, niger, validiusculus, thorace fulvo vittis tribus latissimis nigris, alis subcinereis,* venis nigricantibus, halteribus albidis, *segmentorum abdominalium marginibus posticis cinereis,* pedibus fulvis, tarsis nigris. Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Black, rather stout. Antennæ with black plumes. *Thorax tawny above, with three very broad black dorsal stripes. Wings greyish;* veins mostly blackish. Halteres dingy whitish. *Abdomen pubescent, with a grey band on the hind border of each segment.* Legs tawny, rather stout; tarsi black.

Not common. (E.)

127. **persidens,** n. *Mas, niger, thorace sordide testaceo vittis tribus latis nigris, alis sublimpidis, venis albidis apud costam testaceis,* pedibus fuscis. Long. 2; alar. 3 lin.

Male. Black. Antennæ with black plumes. *Thorax dingy testaceous, with three broad black dorsal stripes. Wings nearly limpid, slightly clouded with black at the base; costal, radial, and cubital veins testaceous, the rest whitish.* Halteres white. Abdomen pubescent. Legs brown, slender.

Rare. (E.)

128. **expalpans,** n. *Mas, albidus, thorace vittis tribus nigris, alis subcinereis pubescentibus, venis testaceis,* halteribus albidis, *abdomine fusco segmentorum marginibus posticis albidis,* pedibus testaceis, femoribus tibiis tarsisque apice nigricantibus. Long. $2\frac{1}{2}$; alar. $3\frac{1}{2}$ lin.

Male. Whitish. Palpi and antennæ black, the latter with brown plumes. *Thorax with three black stripes. Wings slightly greyish, pubescent; veins testaceous.* Halteres whitish. *Abdomen brown above, with a whitish band on the hind border of each segment.* Legs testaceous, minutely pubescent, moderately long; tarsi towards the tips, and tips of the femora and of the tibiæ, blackish.

Not rare. (E.)

129. **obditus,** n. *Mas et Fœm. testaceus, validus, thorace vittis tribus vix divisis nigris, alis sublimpidis, venis apud discum fuscis,* halteribus albidis, *abdomine fusco,* pedibus ferrugineis, tibiis anticis tarsisque fuscis. Long. 2–3; alar. 4–5 lin.

Testaceous, stout. Thorax with three black, almost confluent, stripes. Metathorax and pectus mostly black. *Wings nearly limpid; costal, radial, and cubital veins, and discal transverse veinlet brown, the other veins paler.* Halteres whitish. *Abdomen brown,* shining, pubescent. Legs ferruginous, long, slender; tarsi and fore tibiæ dark brown. *Male.* Antennæ with black plumes.

Not common. (E.)

130. **olivaceus,** Meig. Zw. i. 29. 18 (1818); Mcq.; Stæg.; Zett. *Mas et Fœm. fulvo-viridis, thorace vittis tribus nigris, alis subcinereis, venis* halteribusque *albidis, illis apud costam fuscis, abdomine fuscescente,* pedibus fulvis, tibiis anticis tarsisque fuscis. Long. $2\frac{1}{2}$; alar. 5 lin.

Male and Fem. Dull tawny green. Thorax with three black stripes. Pectus and metathorax black. *Wings slightly grey; costal, radial, and cubital veins brown, the rest whitish.* Halteres whitish. *Abdomen brownish.* Legs dull tawny; tarsi and fore tibiæ brown.

Not common. In the British Museum. (E.)

131. **rubicundus?** Meig. Zw. i. 35. 33 (1818). *Fœm.* pallide testaceus, *thorace vittis tribus cinereis,* alis albo-limpidis, venis halteribusque albis, illis apud costam testaceis, *abdomine rufescente,* femoribus tibiis et tarsis apice fuscescentibus. Long. 1; alar. $2\frac{1}{2}$ lin.

Fem. Pale testaceous. Thorax with three grey stripes. Metathorax

grey. Wings limpid-white; costal, radial, and cubital veins pale testaceous, the rest white. Halteres white. *Abdomen reddish.* Legs testaceous; tips of the femora, of the tibiæ, and of the tarsi, brownish.

Rare. In the British Museum. (E.)

132. **testaceus,** Meq. D. N. i. 198. 16 (1826); Meig.; Stæg.; Zett. *Testaceus, validus,* alis albo-limpidis, venis halteribusque albis; *Mas, thorace vittis tribus* fuscis, *abdomine fusco,* basi testaceo; *Fœm. thorace vittis tribus fulvis,* abdomine testaceo. Long. $1\frac{1}{4}$–$1\frac{1}{2}$; alar. 3 lin.

Testaceous, stout. Wings limpid-white; veins and halteres white. *Male.* Antennæ with brown plumes. *Thorax with three brown stripes,* the middle one divided. Metathorax and disc of the pectus brown. Abdomen brown, pubescent, dull testaceous towards the base. *Fem.* Thorax with three pale tawny stripes. Metathorax tawny. Abdomen testaceous.

Not rare. (E.)

133. **minusculus,** n. *Fœm. pallide viridis, thorace vittis tribus latis luteis,* alis limpidis, venis pedibusque testaceis, femoribus tibiisque apice tarsisque fuscis, tibiis anticis basi fuscis. Long. 1; alar. $2\frac{1}{2}$ lin.

Fem. Pale green. Thorax with three broad luteous stripes. Wings limpid; veins testaceous. Legs testaceous; tarsi and tips of the femora and of the tibiæ brown, fore tibiæ brown towards the base.

Rare. In the British Museum. (E.)

134. **interseptus,** n. *Fœm. albido-testaceus, thorace vittis tribus contiguis rufescentibus,* alis albo-limpidis pubescentibus, venis halteribusque albis, illis apud costam pedibusque testaceis. Long. 2; alar. 5 lin.

Fem. Whitish-testaceous. Thorax with three reddish confluent stripes. Metathorax reddish. Wings limpid-white, pubescent; costal, radial, and cubital veins pale testaceous, the rest white. Halteres white. Legs pale testaceous, long, slender.

Rare. In the British Museum. (E.)

135. **exspatians,** n. *Fœm.* testaceus, thorace vittis tribus luteis, alis limpidis, venis albis apud costam testaceis, halteribus pallide flavis, abdominis segmentis fusco-fasciatis, tarsorum posteriorum articulis tibiisque apice necnon tarsis anticis totis fuscis. Long. $1\frac{1}{4}$; alar. 3 lin.

Fem. Testaceous. Thorax with three luteous stripes. Metathorax brown. Wings limpid; costal, radial, and cubital veins, and discal transverse veinlet testaceous, the other veins white. Halteres pale yellow. Abdominal segments with brown bands in front. Legs rather stout; fore tarsi, and tips of the tibiæ, and of the joints of the posterior tarsi, brown.

Rare. (E.)

136. **pertenuis,** n. *Fœm.* pallide testaceus, gracilis, thorace subproducto, alis limpidis, venis testaceis distinctis. Long. 1; alar. 2 lin.

Fem. Pale testaceous, slender. Thorax slightly produced in front. Wings limpid; veins testaceous, distinct. Legs slender.

Rare. (E.)

137. **obscurus,** F. S. A. 40. 11 (1805); Meig.; Stæg.; Zett.—*barbicornis*, F.; Meig. *Ater, alis sublacteis, venis albis, halteribus pedibusque nigris*, femoribus pubescentibus validiusculis. Long. $1\frac{1}{2}$–2; alar. 3–$3\frac{1}{2}$ lin.

Deep black. Wings somewhat milky-white; veins white. Halteres black. Abdomen pubescent. *Legs black;* femora pubescent, rather stout. *Male.* Antennæ with black plumes.

Common. (E.)

138. **permacer,** n. *Mas et Fœm.* niger, gracilis, pectore ventreque cinereis, alis subcinereis, venis albidis apud costam nigris, *metatarso postico tibiæ posticæ bis triente longiore.* Long. 2; alar. $3\frac{1}{2}$–4 lin.

Male and Fem. Black, slender. Pectus and abdomen beneath grey. Wings very slightly greyish; costal, radial, and cubital veins, and discal transverse veinlet black; the other veins whitish. Abdomen rather long. *Legs* long and slender: *hind metatarsus more than two-thirds of the length of the hind tibia.*

Not common. (E.)

139. **incallidus,** n. *Mas,* niger, alis subcinereis, venis albidis apud costam nigris, halteribus albis, *metatarso postico tibiæ posticæ bis triente breviore.* Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Black. Antennæ with black plumes. Wings very slightly greyish; costal, radial, and cubital veins, and discal transverse veinlet black, the other veins whitish. Halteres white. Abdomen long, slender. Legs long, slender.—Nearly allied to *C. permacer, but with stouter legs, and the hind metatarsus is less than two-thirds of the length of the hind tibia.*

Not common. (E.)

140. **obsepiens,** n. *Mas et Fœm. niger, alis sublimpidis, venis albidis, halteribus albis, abdomine nigro-viridi, pedibus sordide albidis.* Long. $1\frac{1}{2}$; alar. $2\frac{1}{2}$ lin.

Male and Fem. Black. Wings nearly limpid; veins whitish. Halteres white. Abdomen greenish-black. Legs dingy whitish, slender. *Male.* Abdomen with black plumes.

Not rare. (E.)

141. **paganicus,** n. *Fœm. nigro-cinereis, alis subcinereis, venis fuscis, halteribus albidis, pedibus piceis.* Long. $1\frac{1}{2}$; alar. 3 lin.

Fem. greyish-black. Wings greyish; veins brown. Halteres whitish. Legs piceous, slender.

Not common. (E.)

142. **oppertus,** n. *Mas, niger, validus, alis sublimpidis, venis halte-*

ribusque albidis, illis apud costam fuscis, pedibus validiusculis. Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Black, stout. Antennæ with black plumes. Thorax shining. *Wings nearly limpid; costal, radial, and cubital veins, and discal transverse veinlet brown, the other veins whitish. Halteres whitish.* Abdomen pubescent. Legs rather stout.

Rare. (E.)

143. **novatus,** n. *Mas et Fœm. nigro-cinereis, alis subcinereis, venis albidis apud costam fuscescentibus, halteribus* albis, *pedibus obscure fuscis.* Long. $1\frac{1}{2}$–2; alar. $2\frac{1}{2}$–$3\frac{1}{2}$ lin.

Male and Fem. Cinereous-black. Wings very slightly greyish; costal, radial, and cubital veins pale brownish, the rest whitish. Halteres white. Legs dark brown, slender. *Male.* Antennæ with black plumes.

Common. (E.)

144. **nigratus,** n. *Fœm. niger, alis sublimpidis, venis albidis apud costam nigricantibus, halteribus pedibusque testaceis, femoribus tibiis tarsisque apice nigricantibus.* Long. 1; alar. 2 lin.

Fem. Black. Wings nearly limpid; costal, radial, and cubital veins blackish, the rest whitish. Halteres testaceous. Legs testaceous, slender; *tips of the femora, of the tibiæ, and of the tarsi blackish.*

Rare. (E.)

145. **impensus,** n.—*abdominalis?* Stæg.; Zett. *Fœm. niger, alis albo-limpidis pubescentibus, venis halteribusque albis, abdomine rufescente, pedibus testaceis* validiusculis. Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Fem. Black. Wings limpid-white, pubescent; veins and halteres white. Abdomen reddish. Legs testaceous, rather short and stout.

Rare. In the British Museum. (E.)

146. **tibialis?** Meig. Zw. i. 41. 47 (1818); Mcq.; Gim.; Zett. Var.? *Mas, niger, thoracis lateribus fulvis, alis sublimpidis, venis halteribusque albidis, illis apud costam testaceis, segmentorum abdominalium marginibus posticis canis, pedibus fuscescentibus, tibiis albido-unifasciatis.* Long. 2; alar. $3\frac{1}{2}$ lin.

Var.? *Male. Black.* Antennæ with brown plumes. *Thorax tawny on each side. Wings nearly limpid; costal, radial, and cubital veins testaceous, the rest whitish. Halteres whitish. Abdomen with a hoary band on each segment. Legs brownish; a whitish band on each tibia.*

Rare. In the British Museum. (E.)

147. **nexilis,** n. *Mas, canus, thorace vittis tribus nigricantibus, alis sublimpidis, venis albidis apud costam fuscescentibus,* halteribus albis, *abdomine piceo, pedibus testaceis, tibiis et tarsorum articulis apice nigris.* Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Hoary. Antennæ with black plumes. *Thorax with three blackish stripes. Wings nearly limpid; costal, radial, and cubital veins pale brownish, the rest whitish.* Halteres white. *Abdomen piceous.*

Legs dull testaceous, long, slender; *tips of the tibiæ and of the joints of the tarsi black.*

Rare. (E.)

148. **offectus,** n. *Mas, niger, thorace cano vittis tribus fere conjunctis nigris, alis subcinereis, venis albido-testaceis, abdomine nigro-piceo, pedibus fuscis.* Long. 2–2½; alar. 3½–4 lin.

Male. Black, slender. Antennæ with black plumes. *Thorax hoary, with three black, almost confluent, stripes. Wings slightly greyish; veins whitish-testaceous. Abdomen piceous-black. Legs brown*, long, slender.

Not common. (E.)

149. **sordidellus?** Zett. I. L. 814. 26 (1840). *Mas et Fœm. testaceus, thorace vittis tribus nigris, alis subcinereis, venis* albidis *apud costam testaceis, venula transversa fusca*, halteribus albis, *abdomine fusco*, pedibus testaceis, tibiis et tarsorum articulis apice nigricantibus. Long. 2–3; alar. 4–5 lin.

Testaceous. Thorax with three black stripes. Metathorax and disc of the pectus black. *Wings very slightly greyish; costal, radial, and cubital veins testaceous*, the rest whitish; *discal transverse veinlet brown.* Halteres white. *Abdomen brown.* Legs dull testaceous, long, slender; tips of the tibiæ and of the tarsi blackish. *Male.* Antennæ with blackish plumes.

Not common. (E.)

150. **frigidus?** Zett. I. L. 812. 14 (1840); Stæg.? *Mas, niger, thorace testaceo vittis tribus latissimis nigris, alis limpidis*, venis halteribusque albidis, pedibus fuscis. Long. 1; alar. 2 lin.

Male. Black. Antennæ with blackish plumes. *Thorax above testaceous, with three very broad black stripes. Wings limpid;* veins and halteres whitish. Legs brown.

Rare. (E.)

151. **inserpens,** n. *Mas et Fœm. testaceo-viridis, thorace vittis tribus fuscis*, alis albo-limpidis, venis albis apud costam testaceis, halteribus albidis, pedibus testaceis, femoribus tibiisque apice tarsisque fuscis. Long. 2–2½; alar. 3–4 lin.

Testaceous-green. Thorax with three brown stripes. Wings limpid-white; costal, radial, and cubital veins testaceous, the rest white. Halteres whitish. Legs testaceous; tarsi and tips of the femora and of the tibiæ brown. *Male.* Antennæ with brown plumes. Abdomen brown towards the tip.

Not rare. (E.)

152. **notatus?** Meig. Zw. i. 25. 11 (1818). *Fœm. testaceus, thorace vittis tribus nigris, alis subcinereis, venis* halteribusque *albidis*, illis *apud costam abdomineque* necnon tibiis apice tarsisque fuscis. Long. 1¼; alar. 2½ lin.

Fem. Testaceous. Thorax with three black stripes; metathorax black. *Wings very slightly greyish; costal, radial, and cubital veins brown*, the

rest whitish. Halteres whitish. *Abdomen pale brown.* Legs testaceous, slender; tarsi and tips of the tibiæ brown.

Rare. (E.)

153. **nugax,** n. Cervinus, alis limpidis pubescentibus, venis halteribusque albis, illis apud costam testaceis, venula transversa nigra, abdomine albido suturis fuscis, pedibus albidis. Long. $2\frac{1}{2}$; alar. 4 lin.

Fawn-colour. Wings limpid, pubescent; transverse veinlet black; costal, radial, and cubital veins pale testaceous, the rest white. Halteres white. Abdomen whitish, pubescent; sutures of the segments brown. Legs whitish, pubescent.

Nearly allied to *C. pallidulus,* Meig. Rare. (E.)

154. **elegans,** Meig.! Zw. i. 48. 63. pl. 2. f. 7 (1818).—*crassipes,* Panz.—*æstivus,* Curt. B. E. 70.—*hirtipes,* Mcq.; Meig. Zw. vii. Testaceus, thorace producto conico disco aut vittis tribus fulvis lateribus nigro-guttatis, alis sublimpidis nonnunquam nigro-trimaculatis, venis albis apud costam testaceis, halteribus albidis, abdomine punctiunculis nigris, pedibus validis pilosissimis. Long. 3–$3\frac{1}{2}$; alar. 5–6 lin.

Testaceous. Vertex tawny. Thorax prolonged and conical in front, with three tawny stripes and with a row of black dots on each side. Wings nearly limpid, very slightly testaceous along the costa, with three blackish spots, one near the hind border, the other two in the disc at two-thirds of the length; costal, radial, and cubital veins pale testaceous, the rest white. Halteres whitish. Abdomen with black punctures. Legs stout, very pubescent; joints of the tarsi with brownish tips.—Var. β. Disc of the thorax tawny. Wings without blackish spots.

Rare. Inhabits woods. (E.)

155. **stercorarius,** D. G. Ins. vi. 149. 22 (1781); Schr.; Meig.; Mcq.; Zett.; Gim.; Stæg.—*chiopterus,* Meig. Kl. Zw. *Mas et Fœm.* niger, *alis limpidis, venis albidis apud costam nigris, halteribus fuscis, abdomine pubescente, pedibus piceis subpubescentibus.* Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Male and Fem. Black. *Wings limpid; costal, radial, and cubital veins blackish, the rest whitish. Halteres brown. Abdomen pubescent. Legs piceous, minutely pubescent. Male.* Antennæ with black plumes.

Generally distributed. (E. S. I.)

156. **aterrimus,** Meig. Zw. i. 47. 59 (1818); Gim.; Stæg.; Zett. *Mas et Fœm.* ater, *alis limpidis, venis albidis apud costam nigricantibus, halteribus nigris, abdomine pilosissimo, pedibus pilosis,* femoribus crassiusculis. Long. $1\frac{1}{2}$–2; alar. 3–4 lin.

Male and Fem. Deep black. *Wings limpid; costal, radial, and cubital veins blackish, the rest whitish. Halteres black. Abdomen very hairy. Legs hairy;* femora rather thick. *Male.* Antennæ with black plumes.

Generally distributed. (E. S. I.)

157. **lucens?** Zett. D. Sc. ix. 3574. 102 (1850).—*lucidus*, Stæg. *Mas*, niger, validus, *alis albidis basi nigricantibus, venis albis, halteribus fuscis, pedibus piceis* validiusculis. Long. 3; alar. 4 lin.

Male. Black, stout, pubescent. Antennæ with black plumes. *Wings whitish, blackish at the base; veins white. Halteres brown. Legs piceous,* pubescent, rather stout.

Rare. (E.)

158. **minutus?** Zett. D. S. ix. 3522. 39 (1850). *Fœm.* niger, *alis limpidis, venis halteribusque albidis, illis apud costam testaceis, pedibus testaceis, tarsis fuscescentibus.* Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Fem. Black. *Wings limpid; costal, radial, and cubital veins testaceous, the rest whitish. Halteres whitish. Legs dull testaceous; tarsi brownish.*

Rare. (E.)

159. **opplens,** n. *Mas*, niger, thorace nitente, *alis sublimpidis, venis halteribusque albidis, illis apud costam testaceis, pedibus nigricantibus.* Long. $1\frac{1}{2}$–2; alar. 3–$3\frac{1}{2}$ lin.

Male. Black. Antennæ with black plumes. Thorax shining. *Wings nearly limpid; costal, radial, and cubital veins testaceous, the rest whitish. Halteres whitish. Legs blackish,* long, slender.

Not rare. (E.)

160. **plebeius?** Meg.; Meig. Zw. i. 40. 44 (1818). Var.? *Fœm.* niger, *alis limpidis, venis halteribusque albidis, illis apud costam fuscis, pedibus pallide fuscis, metatarsis anticis albidis apice fuscis.* Long. 2; alar. 4 lin.

Var.? *Fem.* Black. *Wings limpid; costal, radial, and cubital veins brown, the rest whitish. Halteres whitish. Legs pale brown; tarsi and tips of the femora and of the tibiæ darker; fore metatarsi whitish, except at the tips.*

Rare. In the British Museum. (E.)

161. **nitidicollis,** Steph. MSS. *Mas*, niger, thorace nitente, *alis albo-limpidis, venis albis, halteribus fuscis, pedibus ferrugineis pubescentibus.* Long. 2; alar. 3 lin.

Male. Black. Antennæ with black plumes. Thorax shining. *Wings limpid-white; veins white. Halteres brown. Legs ferruginous, pubescent.*

Rare. In the British Museum. (E.)

162. **pergens,** n. *Mas*, canus, thorace vittis tribus nigris, *alis subcinereis, venis albidis apud costam fuscis,* halteribus albis, abdomine nigro subtus cinereo, pedibus fulvis, tibiis apice tarsisque nigris. Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Hoary. Antennæ with black plumes. Thorax with three black stripes. *Wings greyish; costal, radial, and cubital veins, and discal transverse veinlet brown, the other veins whitish.* Halteres white.

Abdomen black, cinereous beneath. Legs tawny, long, slender; tarsi and tips of the tibiæ black.

Rare. (E.)

163. **obtexens,** n. *Fœm.* canus, thorace vittis tribus nigris, *alis cinereis, venis* halteribusque *albidis, illis apud costam nigris, abdomine cinereo subtus testaceo, segmentorum marginibus posticis albidis, pedibus nigro-fuscis.* Long. $2\frac{1}{2}$; alar. 7 lin.

Fem. Hoary. Thorax with three black stripes. *Wings* long, *grey; costal, radial, and cubital veins, and discal transverse veinlet black, the rest whitish.* Halteres whitish. *Abdomen cinereous, testaceous beneath; hind borders of the segments whitish. Legs blackish-brown, long, slender.*

Not common. (E.)

164. **deproperans,** n. *Fœm.* canus, thorace vittis tribus nigris, *alis subcinereis, venis pallide fuscis apud costam obscurioribus,* halteribus albidis, *abdomine nigro subtus fuscescente, segmentis flavo-fasciatis, pedibus nigris.* Long. $1\frac{1}{2}$; alar. 3 lin.

Fem. Black. Thorax hoary, with three black stripes. *Wings greyish; costal, radial, and cubital veins, and discal transverse veinlet dark brown, the other veins pale brown.* Halteres whitish. *Abdomen brownish beneath; a yellow band on the hind border of each segment. Legs black, stout.*

Not common. (E.)

165. **obsistens,** n. *Mas,* canus, thorace vittis tribus vix conspicuis nigris, *alis subcinereis, venis fuscescentibus apud costam nigris,* halteribus albidis, *pedibus validis.* Long. $1\frac{3}{4}$; alar. 3 lin.

Male. Black. Antennæ with black plumes. Thorax hoary, with three indistinct black stripes. *Wings greyish; costal, radial, and cubital veins black, the other veins brownish.* Halteres whitish. *Legs stout, moderately long.*

Not common. (E.)

166. **pertractus,** n. *Mas,* canus, thorace vittis tribus nigris, *alis cinereis, venis albidis,* halteribus albis, *abdomine nigro-cinereo suturis albidis, pedibus piceis attenuatis.* Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Hoary, slender. Thorax with three black stripes. *Wings grey; veins whitish.* Halteres white. *Abdomen cinereous-black; sutures whitish. Legs piceous, rather long and slender.*

Not common. (E.)

167. **moturus,** n. *Mas et Fœm.* cinereus, thorace vittis tribus nigris, alis sublimpidis, venis albidis apud costam testaceis, halteribus albis, abdomine nigro, segmentorum marginibus posticis cinereis, *pedibus nigris,* femoribus validiusculis. Long. $1\frac{3}{4}$; alar. 3 lin.

Grey. Thorax with three black stripes. Wings nearly limpid; costal, radial, and cubital veins testaceous, the rest whitish. Halteres

white. Abdomen black; hind borders of the segments grey. *Legs black;* femora rather thick. *Male.* Antennæ with black plumes.

Not common. (E.)

168. **tremulus,** L. F. S. 1762 (1761); F.; Gmel.; Meig.; Mcq.; Zett.; Stæg. *Mas et Fœm.* flavus, nitens, thorace vittis tribus nigris, alis limpidis, venis albidis apud costam nigricantibus, halteribus albis, *abdomine nigro fascia basali flava,* pedibus albis, femoribus tibiisque apice, tibiis basi tarsisque nigris. Long. 1–1½; alar. 3–4 lin.

Male and Fem. Yellow, shining. Thorax with three black stripes. Wings limpid; costal, radial, and cubital veins blackish, the rest whitish. Halteres white. *Abdomen black, with a yellow band at the base.* Legs white; tarsi, femora, and tibiæ at the tips and at the base black. *Male.* Antennæ with black plumes. Sutures of the abdominal segments whitish.

Generally distributed. (E. S. I.)

169. **motitator,** L. Fn. Sc. 1760 (1761); F.; Geoff.; Schr.; Gmel.; Latr.; Lam.; Meig.; Mcq.; Gim.; Zett.; Stæg.; Ros.—*bicinctus?* Meg.; Meig. Zw. i. 41. 48 (1818); Mcq.; Zett.; Gim.——*dizonias,* Meig.; Stæg. *Mas et Fœm.* flavus, nitens, thorace vittis tribus nigris, alis limpidis, venis albidis apud costam nigricantibus, halteribus albis, *abdomine nigro fasciis duabus flavis,* pedibus albis, femoribus tibiisque apice, tibiis basi tarsisque nigris. Long. 1–1¼; alar. 3–3½ lin.

Male and Fem. Yellow, shining. Thorax with three black stripes. Wings limpid; costal, radial, and cubital veins blackish, the rest whitish. Halteres white. *Abdomen black, with two yellow bands, the first at the base, the second in the middle, occasionally subdivided.* Legs white; tarsi, femora, and tibiæ at the tips, and tibiæ at the base, black. *Male.* Antennæ with black plumes.

Generally distributed. (E. S. I.)

170. **sylvestris,** F. E. S. iv. 252. 89 (1792); Meig.; Gim.; Stæg.; Ros.; Zett.—*vibratorius,* Meig. Kl. Zw.—*trifasciatus?* Panz.; Meig.; Stæg.; Gim.; Zett.—*ornatus?,* Meig.; Stæg.—*tricinctus?* Meig.; Mcq.; Gim.; Stæg.; Zett. *Mas et Fœm.* flavus, nitens, thorace vittis tribus latis nigris, alis limpidis, venis albidis apud costam nigricantibus, halteribus pedibusque albis, femoribus tibiisque apice, tibiis basi tarsisque nigris; *Mas, abdomine nigro fasciis flavis; Fœm. abdomine flavo fasciis nigris.* Long. 1–1½; alar. 3–4 lin.

Male and Fem. Yellow, shining. Thorax with three broad black stripes. Wings limpid; costal, radial, and cubital veins blackish, the rest whitish. Halteres white. Legs white; tarsi, femora, and tibiæ at the tips, and tibiæ at the base, black. *Male.* Antennæ with black plumes. *Abdomen with three or more yellow bands. Fem. Abdomen yellow, with short black bands.*

Generally distributed. (E. S. I.)

171. **modestus?** Meig. Zw. vi. 256. 115 (1830). *Mas, pallide testaceus, thorace vittis tribus nigricantibus, alis albo-limpidis pubescentibus, venis* halteribusque *albis*, abdomine fusco, pedibus testaceis, femoribus tibiisque apice tarsisque fuscis. Long. $\frac{3}{4}$–1; alar. 2 lin.

Male. Pale testaceous. Antennæ with brown plumes. *Thorax with three blackish stripes. Wings limpid-white, pubescent; veins* and halteres *white.* Abdomen brown. *Legs testaceous; tarsi and tips of the femora and of the tibiæ brown.*

Not rare. (E.)

172. **denotatus,** n. *Mas et Fœm. testaceus, thorace vittis tribus fuscis, alis albo-limpidis, venis* halteribusque *albis*, abdomine fusco basi subtus testaceo, *pedibus pallide testaceis.* Long. 2–2$\frac{1}{2}$; alar. 4 lin.

Male and Fem. Testaceous. Thorax with three brown stripes. Metathorax black. *Wings limpid-white; veins* and halteres *white.* Abdomen brown, testaceous beneath towards the base. *Legs pale testaceous,* slender. *Male.* Antennæ with brown plumes.

Not common. (E.)

173. **melaleucus,** Meig. Zw. i. 39. 41 (1818). Var.? *Fœm. albidus, thorace vittis tribus fuscis, alis subcinereis, venis* halteribusque *albidis, illis apud costam fuscis,* abdomine *pedibus*que *fuscis.* Long. 1$\frac{1}{2}$; alar. 3 lin.

Var.? *Fem. Whitish. Thorax with three brown stripes. Wings slightly greyish; costal, radial, and cubital veins brown, the rest whitish.* Halteres whitish. Abdomen brown. *Legs brown,* long, slender.

Rare. In the British Museum.

174. **alligatus,** n. *Mas, niger, alis subalbidis, venis albidis apud costam fuscescentibus,* halteribus albis, pedibus longiusculis. Long. 2; alar. 3 lin.

Male. Black. Antennæ with black plumes. *Wings slightly whitish, nearly limpid; costal, radial, and cubital veins, and discal transverse veinlet brownish, the rest whitish.* Halteres white. Legs rather long.

Not rare. (E.)

175. **adjunctus,** n. *Fœm. canus, thorace vittis tribus nigris, alis subcinereis* ad *costam subfuscescentibus, venis fuscis apud costam nigris,* halteribus albidis, abdomine fusco subtus livido, *pedibus nigro-fuscis.* Long. 1$\frac{3}{4}$; alar. 3 lin.

Fem. Hoary. Thorax with three black stripes. Wings greyish, slightly brownish along the costa; costal, radial, and cubital veins black, the other veins brown. Halteres whitish. *Abdomen brown, livid beneath. Legs blackish-brown,* moderately long; femora rather thick.

Not common. (E.)

176. **coæquatus,** n. *Fœm. niger, nitens, alis cinereis, venis* halteribusque *albidis, illis apud costam fuscis, pedibus* fuscis. Long. 1$\frac{1}{4}$–1$\frac{1}{2}$; alar. 2$\frac{1}{2}$–3 lin.

Fem. Black, shining. Wings grey; costal, radial, and cubital veins

brown, the rest whitish. Halteres whitish. *Legs brown,* slender, moderately long.

Not rare. (E.)

177. **appositus,** n. *Mas,* niger, alis albidis sublimpidis, venis halteribusque albis, *illis apud costam testaceis, abdomine nigro-fusco, pedibus obscure fuscis.* Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Black. Antennæ with black plumes. *Wings whitish, nearly limpid; costal, radial, and cubital veins testaceous, the rest white.* Halteres white. *Abdomen blackish-brown. Legs dark brown,* long, slender, pubescent.

Not common. (E.)

178. **perexilis,** n. *Fœm.* pallide testaceus, alis albo-limpidis, venis halteribusque albis, pedibus testaceis breviusculis. Long. $\frac{1}{2}$; alar. 1 lin.

Fem. Pale testaceous. Wings limpid-white; veins and halteres white. Legs pale testaceous, rather short and stout.

Rare. In the British Museum. (E.)

179. **byssinus,** Schr. F. B. iii. 2330 (1798); Meig.; Mcq.; Zett.; Gim.; Stæg. *Mas et Fœm. ater,* alis lacteo-albis basi nigris, *venis albis, halteribus* pedibusque *nigris,* his validiusculis. Long. $1-1\frac{1}{4}$; alar. 2 lin.

Male and Fem. Deep black. Wings milky-white, black at the base; veins white. Halteres black. Abdomen slightly pubescent. Legs black, rather stout. *Male.* Plumes of the antennæ black, whitish towards the tips.

Generally distributed. (E. S. I.)

180. **minimus,** Meig. Zw. i. 47. 61 (1818); Mcq.; Stæg.; Zett. *Mas et Fœm. ater, alis albo-limpidis, venis halteribusque albidis, pedibus nigro-piceis.* Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Male and Fem. Deep black. Wings limpid-white; veins and halteres whitish. Legs piceous-black, pubescent.

Not rare. (E.)

181. **compertus,** n. *Fœm. niger, alis subcinereis, venis albidis apud costam testaceis, halteribus nigricantibus,* pedibus ferrugineis, tarsis nigris. Long. $1\frac{1}{4}$; alar. 2 lin.

Fem. Black. Wings greyish; costal, radial, and cubital veins testaceous, the rest whitish. Halteres blackish. Legs ferruginous; tarsi black.

Not common. (E.)

182. **contingens,** n. *Mas, niger, alis limpidis, halteribus venisque albidis, illis apud costam testaceis, pedibus fuscis.* Long. $1\frac{1}{4}$; alar. 2 lin.

Male. Black. Antennæ with black plumes. *Wings limpid; costal, radial, and cubital veins testaceous, the rest whitish. Halteres whitish.* Abdomen slightly pubescent. *Legs brown.*

Not rare. (E.)

183. **fertus,** n. *Mas et Fœm. niger, thorace cinereo vittis tribus nigris, alis subcinereis, venis fuscescentibus apud costam nigricantibus, halteribus albidis,* pedibus validis. Long. 2; alar. 3 lin.

Male and Fem. Black. Thorax grey, with three black stripes. Wings greyish; costal, radial, and cubital veins blackish, the rest brownish. Halteres whitish. Legs stout, pubescent. *Male.* Antennæ with black plumes.

Not rare. (E.)

184. **habilis,** n. *Fœm. niger, alis sublimpidis, venis albidis apud costam nigris, halteribus albidis apice nigris, pedibus albidis.* Long. 1; alar. 2 lin.

Fem. Black. Wings nearly limpid; costal, radial, and cubital veins black, the rest whitish. Halteres whitish, with black tips. Legs whitish, slender.

Rare. (E.)

185. **divisus,** n. *Mas, pallide testaceus, thorace vittis tribus rufescentibus, alis subcinereis* pubescentibus, venis albidis, halteribus albis, *abdomine fasciis duabus anticis fuscis, segmentis tribus apicalibus nigris, pedibus albidis.* Long. 2; alar. 3 lin.

Male. Pale testaceous. Palpi and antennæ black. *Thorax with three pale reddish stripes. Wings very slightly greyish,* pubescent; veins whitish. Halteres white. *Abdomen pale testaceous,* pubescent, *with two brown bands before the middle; three apical segments black. Legs whitish,* slender.

Rare. (E.)

186. **annulipes?** Meig. Zw. i. 42. 51 (1818). Var.? *Fœm.* flavus, *thorace vittis tribus nigris, alis subcinereis,* venis albidis apud costam fuscis, halteribus flavis, *abdomine nigro, segmentorum marginibus posticis flavis, pedibus nigris* validiusculis, *femoribus basi flavis, tibiis* albocinctis. Long. $1\frac{3}{4}$; alar. 3 lin.

Var.? *Fem.* Yellow. *Thorax with three moderately broad black stripes;* scutellum, pectus, and metathorax black. *Wings greyish;* costal, radial, and cubital veins brown, the rest whitish. Halteres pale yellow. *Abdomen black; hind borders of the segments yellow. Legs black,* rather stout; *femora yellow towards the base; a white band on each tibia.*

Rare. In the British Museum. (E.)

187. **pygmæus?** Meig. Zw. i. 36. 34 (1818). Var.? *Fœm. testaceus, thorace vittis tribus fuscis, alis vix cinereis,* venis halteribusque albidis, illis apud costam fuscescentibus, *abdomine vitta dorsali nigricante, pedibus testaceis.* Long. $\frac{3}{4}$; alar. 2 lin.

Var.? *Fem.* Testaceous. *Thorax with three brown stripes. Wings hardly greyish;* costal, radial, and cubital veins brownish, the rest whitish. Halteres whitish. *Abdomen with a blackish dorsal stripe. Legs dull testaceous.*

Rare. In the British Museum.

Group 2.

Hydrobænus, Fries, Kongl. Vet. Acad. Handl. 1829. 176. *Psilocerus*, Ruthe, Isis, 1831. 1207.

This group only contains the following species, which inhabits several parts of North Europe, but has not yet been certainly found in Britain.

188.* **lugubris,** Fries, Kongl. Vet. Acad. Handl. 1829. 176 (1829). —*occultans*, Meig.; Ruthe; Zett. Ater, opacus, alis nigricantibus, pedibus piceis. Long. $\frac{3}{4}$ lin.

Group 3.

189. **lacustris,** Hal. Westw. Class II. Syn. Gen. Brit. Ins. 125 (1840). Prasinus, mesonoti vittis tribus et pectore carneis, alis albidis nudis, tibiis anticis fuscis. Long. *mas* 2, *fœm.* $1\frac{1}{2}$; alar. 3 lin.

Light grass-green. Palpi dusky, except the base. Three confluent stripes on the mesonotum and the mesosternum (flesh-colour or) ferruginous, also the mesothorax, dusky at the tip. Wings whitish-hyaline, naked; veins light yellowish. Halteres pale. Fore tibiæ and fore tarsi, except the base, dusky; posterior tarsi dusky only towards the end; first joint of fore tarsi twice as long as the tibia in the female, more elongated in the male; fifth joint not half as long as the fourth. *Male.* Antennæ twelve-jointed, dingy yellow, with yellowish plumes; last joint much longer than the rest together. *Fem.* Antennæ seven-jointed; the last joint dusky, linear, one-third of the length of the entire antenna.

Found by Mr. Haliday by Loch Fad (Bute), Lough Neagh, and Lough Dirg. (S. I.)

Group 4.

Diamesa, Meig. Zw. vii. 12 (1838); Zett.; Stæg.

190. **obscurimanus,** Meig. Zw. vi. 248. 88 (1830). *Fœm. obscure testaceus*, palpis antennisque nigris, *thorace vittis tribus piceis*, alis cinereis, venis halteribusque albidis, illis apud discum nigris, abdominis segmentis testaceo-marginatis, pedibus fulvis, tarsis nigris. Long. 3; alar. 6 lin.

Fem. Dark testaceous, shining. Palpi and antennæ black, the latter seven-jointed, testaceous at the base. Thorax with three piceous stripes, the middle one subdivided. Wings grey; costal, radial, and cubital veins, and præbrachial transverse veinlet black, the rest whitish; *pobrachial areolet closed before the fork of the pobrachial vein* (as in *Tanypus punctipennis*, etc.). Halteres whitish. Abdomen black; hind borders of the segments testaceous. Legs tawny, rather stout, minutely pubescent;

* Since the Synopsis, p. 152–154, was printed, the species numbered 188 has been ascertained to belong to the genus *Corynoneura*.

tarsi black; *fourth joint about twice as long as the fifth. Male.* Antennæ plumate; last joint linear, much longer than the rest united.

Not rare. (E. I.)

191. **Chiron,** Hal. MSS. *Mas,* "*cinereus,* pleuris pedibusque flavidis, tarsis anticis barbatis. Long. 2; alar. 4 lin."

Male. "Antennæ brownish-yellow; first joint dusky cinereous; feathers yellowish; last joint much longer than the rest jointly. Thorax with the sides ferruginous before the wings (scutellum also, but darker). Wings hyaline; veins very pale (so that the characteristic transverse vein is easily overlooked); pobrachial areolet closed a little beyond the fork of the pobrachial vein. Halteres pale yellow. Legs and coxæ ferruginous; only the tips of the tarsi dusky; *fourth joint of the tarsi about twice as long as the fifth;* posterior femora and tibiæ hairy; fore tarsi still more so; first joint a little shorter than the tibia. (Abdomen lost in the only specimen.)"—*Hal. MSS.*

Rare. Found by Mr. Haliday, near Holyrood, Belfast. (I.)

192. **Waltlii,** Meig. Zw. vii. 13. 1 (1838). "*Fœm. nigricans, thoracis dorso schistaceo.* Long. $2\frac{1}{3}$; alar. $4\frac{1}{2}$ lin.

"*Fem.* Blackish, with a slaty-grey tinge on the vertex, mesonotum, and metanotum, and three faint, darker, shifting stripes on the mesonotum. Antennæ eight-jointed; last joint long-elliptical, as long as the three preceding. Wings hyaline, with the anterior veins conspicuous fuscous; the pobrachial areolet closed beyond the fork of the pobrachial vein (as in *Tanypus nebulosus*). Incisures of the abdomen with a paler shade. Legs finely pubescent; first joint of the fore tarsi shorter than the tibiæ; *fourth shorter than the fifth, notched at the tip.*"—*Hal. MSS.*

Rare. (E. I.)

193. **Ammon,** Hal. MSS. "*Schistaceus,* femoribus tibiisque posterioribus flavidis anticis fuscis; *Mas,* alis albis; *Fœm. antennis* 8-*articulatis,* pleuris et ventre flavidis, alis subhyalinis. Long. 2; alar. 4 lin.

"Pale slaty-grey. Fore legs dusky; femora at the base and coxæ light ferruginous; posterior femora and posterior tibiæ ferruginous, except at the tips; (tarsi sometimes lighter brown at the base;) fourth joint the shortest, notched, almost obcordate. *Male.* Front broad. Eyes a little emarginate internally. Antennæ nearly as long as the thorax; first joint dusky, rest dingy-yellowish; last nearly two-thirds of the whole length; feathers light yellowish; sides of the thorax generally a little ferruginous before the wings. Wings white, as is also the very faint pubescence of the hind margin; the usual veins pale brownish, whitish towards the base. Abdomen blackish, clothed with long, pale soft hairs; first joint of fore tarsus about as long as the tibiæ. *Fem. Antennæ eight-jointed,* dusky; first joint thick, ferruginous; last longer than the three preceding together. Thorax ferruginous, with three confluent bands on the mesonotum; scutellum rather pitchy-reddish; metanotum and mesosternum pale slaty-grey. Wings hyaline,

rather obscure, broader than in the male; veins more evident, dusky-ferruginous. Abdomen above dark grey, except the incisures, or (in immature specimens) with only an interrupted dusky line down the back; first joint of the fore tarsus shorter than the tibia."—*Hal. MSS.*

Found by Mr. Haliday on sand hills in county Down, also in Cork, and in Kerry. (I.)

194. **Typhon,** Hal. MSS. *Fœm. schistaceus, antennis 7-articulatis,* alis albis, pleuris, ventre, femoribus tibiisque posterioribus flavidis anticis fuscis. Long. 2; alar. 4 lin.

Fem. "Very like the preceding species, *but with the antennæ seven-jointed.* Pale yellowish. Vertex, three confluent stripes on the mesonotum, metanotum, and mesosternum cinereous (scutellum paler). Antennæ fuscous; first joint ferruginous; seventh elliptical, as long as the three preceding, or more. Wings white-hyaline; usual veins distinct, fuscous, yellowish towards the base; pobrachial areolet closed beyond the fork of the pobrachial vein. Abdomen above cinereous, with pale incisures; coxæ ferruginous, outwardly cinereous. Fore legs dusky; femora at the base and coxæ pale yellowish; posterior femora and tibiæ ferruginous, with dusky tips; fourth joint of the tarsi short, obcordate, notched at the tip; first joint of the fore tarsi very little shorter than the tibia."—*Hal. MSS.*

Rare. One specimen found by Mr. Haliday at Blarney, near Cork, in September. (I.)

195. **tonsus,** Hal. MSS. *Mas,* "*schistaceus, antennis parce ciliatis,* articulo extremo parum elongato, pleuris flavidis, alis subhyalinis, pedibus anticis fuscis, femoribus tibiisque posterioribus flavidis. Long. $1\frac{1}{2}$; alar. 3 lin."

Male. "The smallest of this group, not unlike *C. Ammon,* but the antennæ quite different, the forceps light-coloured (and differently formed?), and the wings not white. Pale ferruginous. Vertex, mesonotum, metanotum, and mesosternum pale slaty-grey. Eyes distant, but little notched. *Antennæ* dingy-yellowish, half the length of the thorax; last joint elongate-elliptical, not one-fourth of the length of the antennæ; second and next joints subglobose, then gradually increasing in length, and becoming oblong, *scantily verticillate, with long hairs, not forming a plume as usual.* Wings obscurely hyaline; veins light rust-brown; pobrachial areolet scarcely passing the fork of the pobrachial vein. Abdomen dusky, with narrow pale incisures; forceps ferruginous (the claw paler, dilated for half its length, and denticulated internally). Legs pale ferruginous, longer than in *C. Ammon;* femora and tibiæ at the tips (fore pair almost entirely), and tarsi brownish; fourth joint of the tarsus shorter than the fifth, notched at the tip; first joint shorter than the tibiæ."—*Hal. MSS.*

Rare. One male found by Mr. Haliday on Mourne Mountains, county Down, and another at Fir House, near Dublin. (I.)

The following additional species of *Chironomus* have been recorded as British :—

1. C. obscuripes, *Meig.* Zw. vi. 244. 76 (1830).
2. C. scutellatus, *Meig.* Zw. i. 33. 28 (1818).
3. C. terminalis, *Meig.* Zw. i. 34. 29 (1818).
4. C. thoracicus, *Wd.; Meig.* Zw. i. 32. 24 (1818).
5. C. cingulatus, *Meig.* Zw. vi. 245. 77 (1830).
6. C. pilicornus, *Fabr.* Ent. Syst. iv. 243. 45 (1805).
7. C. vitripennis, *Meig.* Zw. i. 32. 26 (1818).
8. C. lætus, *Meig.* Zw. i. 38. 39 (1819).
9. C. nitidus, *Meig.* Zw. i. 35. 32 (1818).
10. C. dispar, *Meig.* Zw. vi. 247. 85 (1830).
11. C. perennis, *Meig.* Zw. vi. 249. 92 (1830).
12. C. proximus, *Meig.* Zw. vi. 250. 96 (1830).
13. C. geniculatus, *Fabr.* Ent. Syst. iv. 247. 68 (1794).
14. C. gibbosus, *Meig.* Zw. vi. 252. 102 (1830).
15. C. annulipes, *Meig.* Zw. i. 42. 51 (1818).
16. C. pygmæus, *Meig.* Zw. i. 36. 34 (1818).
17. C. melaleucus, *Meig.* Zw. i. 39. 41 (1818).
18. C. tristis, *Wd.; Meig.* Zw. i. 48. 62 (1818).
19. C. niger, *Mcq.* D. N. I. 13 (1826), H. N. D. i. 53. 28 (. 834).
20. C. leucopogon, *Meig.* Zw. i. 39. 42 (1818).
21. C. fuscus, *Meig.* Zw. i. 52. 75 (1818).
22. C. picipes, *Meig.* Zw. i. 52. 74 (1818).
23. C. flavipes, *Meig.* Zw. i. 50. 67 (1818).
24. C. Junci, *Meig.* Zw. i. 56. 68 (1818).
25. C. affinis, *Wd.; Meig.* Zw. i. 51. 72 (1818).
26. C. albidus, *Wd.; Meig.* Zw. i. 51. 71 (1818).
27. C. tenuis, *Meig.* Zw. vi. 255. 112 (1830).
28. C. nanus, *Meig.* Zw. i. 50. 69 (1818).
29. C. flabellatus, *Meig.* Zw. i. 51. 70 (1818).

Genus II. **TANYPUS.**

TANYPUS, Meig. Klass. i. (1804); Panz.; Latr.; Wied.; Fries; Mcq.; Curt.; Zett.; Gim.; Stæg. *Tipula* p., L.; D. G.; F. E. S.; Schr.; Gmel.; Meig. Kl. *Chironomus* p., F. S. A.

Corpus elongatum, pubescens, mediocre aut parvum. Oculi reniformes, remoti. Proboscis brevis. Palpi 4-articulati, incurvi, subcylindrici, articulus primus secundo multo brevior; secundus tertio brevior; quartus tertio multo longior. Antennæ 14-articulatæ, porrectæ, filiformes. Thorax ovatus, convexus. Scutellum mediocre. Metathorax semi-ovatus, subgibbosus, sulcatus. Alæ angustæ, elongatæ, lanceolatæ, deflexæ, sæpissime pubescentes. Abdomen gracile, seg-

mentis 8. Pedes sat longi, pubescentes, inermes. *Mas.* Antennæ plumosæ; articuli usque ad duodecimum globosi; decimus tertius longissimus; decimus quartus brevis, subconicus. *Fœm.* Antennæ pilosæ, submoniliformes; articuli globosi; decimus quartus crassior.

Body of moderate or small size, elongate, somewhat pubescent. Eyes reniform, separate in both sexes. Mouth not elongated. Palpi four-jointed, prominent, curved, nearly cylindrical; first joint much shorter than the second; second shorter than the third; fourth nearly as long as the second and the third. Antennæ fourteen-jointed, porrect, filiform, seated in a notch of the eyes. Thorax oval, convex, higher than the head. Scutellum of moderate size. Metathorax semioval, slightly gibbous, with a small longitudinal furrow. Wings narrow, elongate, lanceolate, deflexed, generally pubescent, most often ciliated along the hind border; mediastinal vein ending at beyond half the length of the wing; subcostal ending at before two-thirds of the length; radial emerging from the præbrachial transverse veinlet, ending at beyond three-fourths of the length; cubital also proceeding from the præbrachial transverse veinlet, ending at very little in front of the tip; subapical ending at very little behind the tip; subanal forming a fork of the præbrachial; anal complete; subaxillary not reaching the border. Areolets thirteen,—the humeral, the subcostal, the mediastinal, the radial, the cubital, the præbrachial, the pobrachial, the subapical, two externo-medial, the anal, the axillary, and the subaxillary; the two last partly united. Posterior margin much excavated, and forming a slightly acute angle at its base. Abdomen with eight segments, much longer than the thorax. Legs slender, moderately long, pubescent, unarmed; coxæ of moderate size; ungues and onychia very small. Fore legs remote from the others, porrect, their tarsi somewhat elongated. *Male.* Antennæ plumose; joints from the first to the twelfth globose, very small; thirteenth extremely long; fourteenth short, nearly conical. Abdomen longer, more slender and more hairy than that of the female, with two small, curved, caudal appendages. Fore tarsi occasionally pilose. *Fem.* Antennæ pilose, submoniliform; joints globose; the fourteenth rather thicker than the others, sublanceolate, pubescent, more acuminated. Fore tarsi always bare.

The *Tanypi* are generally similar to the *Chironomi* in their habits. Most of the species have spotted wings; some have white and almost transparent bodies, and the delicate structure of *T. monilis* is very remarkable.

"The larva of *T. maculatus* resembles that of *Corithus plumicornis*, but is less elongated, its head is more oval, the thorax has at its base beneath a long pediform bifid tentacle, and the tip of the abdomen is furnished with four minute triangular plates, which have two long pediform appendages beneath and two above, the latter more slender, and with long terminal hairs. It is found at all seasons of the year, the depth of winter excepted, in stagnant

waters, and keeps its body always doubled, as it were, in two, against the sides of ditches or the stalks of aquatic plants. If it is placed in a glass half-full of water, it so fixes itself against the sides of it, that its head and tail are in the water, while the remainder of the body is out of it, thus assuming the form of a siphon, the tail end being the longest. When it is disposed to feed, it lifts its head and places it horizontally on the surface of the water, so that it forms a right angle with the rest of the body, which always remains in a situation perpendicular to the surface. It then agitates, with vivacity, a couple of brushes, formed of hairs, and fixed in the anterior part of the head, which producing a current towards the mouth, it makes its meal of the various species of animalcula, abounding in stagnant waters, that come within the vortex thus produced. As it requires to be firmly fixed to the substance on which it takes its station, and its back is the only part, when it is doubled, that can apply to it, it is furnished with minute legs armed with black claws, by which it is enabled to adhere to it. It has ten of these legs: the four anterior ones, which point towards the head, and are distant from each other, are placed upon the fourth and fifth dorsal segments of the body; and the six posterior ones, which point to the anus, and are so near to each other as at first to look like one leg, are placed on the eighth, ninth, and tenth. When the animal moves, the body continues bent, and the sixth segment, which is without feet, and forms the summit of the curve, goes first. Its legs are of a nearly similar construction with those of *Helophilus pendulus*. In the interior of its thorax are two long, oval, opaque bodies, which are supposed to be air-reservoirs; these, when the animal assumes the pupa, appear to become external, and are placed on the back, precisely where the respiratory horns of aquatic pupæ are usually situated, and apparently terminate in a transparent point. The pupa is bent, like that of *Culex*, but with broader oval thoracic appendages, and small anal plates.

"The larva of *T. monilis* is found in swampy places and in ditches, is not bigger than a horsehair, and about a quarter of an inch in length. Its mode of swimming is like that of a serpent, with an undulating motion of the body, and it sometimes walks upon the bottom of the water and upon aquatic plants. It has three legs; the anterior leg is attached to the under side, towards the head, of the first segment of the body; it is long and cylindrical, placed perpendicularly or obliquely, according to the different movements the animal gives it, and terminates in two feet, armed at their extremity by a coronet of long movable hooks; these feet

are retractile within the leg, and even within the body. The two posterior legs are placed at the anal end of the body. They are similar to the fore leg, but larger, and entirely separate from each other, being not, like them, retractile within the body, but always stiff and extended; these also are armed with hooks. By the inflection of the anus the larva can give them any kind of lateral movement, except that it can neither bend nor shorten them."

The species may be grouped thus:—

A. Wings spotted.
  a. Thorax with four darker stripes. Species 1–3.
  a a. Thorax with three darker stripes. Species 4–9.
  a a a. Thorax indistinctly striped. Species 10.
A A. Wings not spotted.
  a. Thorax striped.
    b. Thorax with three brown stripes. Species 11, 12.
    b b. Thorax with three reddish or luteous stripes. Species 13–15.
    b b b. Thorax grey, with black stripes. Species 16.
  a a. Thorax not striped. Species 17.

1. **varius,** Fabr. Mant. Ins. ii. 325. 45 (1787); Gmel.; Meig.; Latr.; Fries; Mcq.; Gim.; Stæg.; Ros.; Zett. *Mas et Fœm. testaceus, thorace vittis quatuor ferrugineis, alis cinereis, fascia media maculisque albidis*, halteribus albidis, femoribus, tibiis tarsisque posterioribus apice fuscescentibus; *Mas*, antennarum plumis et abdominis suturis fuscescentibus. Long. 2–2½; alar. 4–5 lin.

Testaceous. Thorax with four ferruginous stripes. Wings grey, with whitish spots, and with a whitish middle band; veins pale, partly blackish. Halteres whitish. Legs slender, pubescent; tips of the posterior femora, tibiæ, and tarsi brownish; fore tibia longer than the fore metatarsus by one-third. *Male.* Antennæ with brownish plumes. Abdomen hairy, paler than that of the female; sutures of the segments brownish.

Generally distributed. (E. S. I.)

2. **nebulosus,** Meig. Zw. i. 57. 2 (1818); Fries; Mcq.; Curt.; Zett.; Gim.; Stæg. *Mas et Fœm. canus, thorace vittis quatuor fuscis, alis* sublimpidis, *macula antica apices versus strigisque marginalibus posticis cinereis*, halteribus albis, abdomine nigro-cinereo, segmentis albido-marginatis, pedibus testaceis, femoribus, tibiis et tarsorum articulis apice fuscis. Long. 3–4; alar. 5–6 lin.

Male and Fem. Hoary. Thorax with four brown stripes. Wings nearly limpid, *with a grey spot near the fore border at three-fourths of the length, and with grey streaks on the veins along the hind border;* veins along the costa black, the rest paler. Halteres white. Abdomen blackish-grey; hind borders of the segments whitish. Legs slender, dull testaceous; tips of the femora, of the tibiæ, and of the joints of the

tarsi, brown; fore tibiæ longer than the fore metatarsi by one-half. *Male.* Antennæ with black plumes.

Generally distributed. (E. S. I.)

3. **choreus,** Meig. Klass. Zw. i. 23. 6 (1804); Meq.; Stæg.; Zett. —*fasciatus*, Meig.—*sylvaticus*, Meig. *Mas et Fœm. canus, thorace vittis quatuor fuscis, alis striga apud venulam transversam nigra, fascia lata ante apicali cinerea*, halteribus albidis, abdomine fusco, pedibus testaceis, tibiis et tarsorum articulis apice fuscis; *Mas*, abdominis segmentis albido-marginatis. Long. 1½–2; alar. 3–4 lin.

Male and Fem. Hoary. Thorax with four brown stripes. Wings clouded with grey, nearly limpid along the costa towards the base and at the tips; discal transverse veinlet clouded with black. Halteres whitish. Abdomen brown. Legs dull, testaceous; tips of the tibiæ and of the joints of the tarsi brown; fore tibiæ longer than the fore metatarsi by one-half. *Male.* Antennæ with black plumes. Hind borders of the abdominal segments whitish.

Generally distributed. Observed by Mr. Saunders in immense clouds on Wandsworth Common in the beginning of September, 1843. (E. S. I.)

4. **punctatus,** F. S. A. 43. 24 (1805); Meig.; Stæg.; Rs.; Zett. —*nebulosus*, Meig. Klass. *Mas et Fœm.* albido-testaceus, *thorace vittis tribus* et metathorace *cinereis, scutello albo*, alis albidis, fasciis tribus incompletis fuscis, halteribus albis, abdomine pedibusque albidis, illius segmentis fusco-fasciatis. Long. 3; alar. 5 lin.

Male and Fem. Whitish-testaceous. *Thorax with three grey stripes, the middle one double, abbreviated hindward; scutellum white;* metathorax grey. Wings whitish, with three irregular, incomplete, indistinct, and very pale brown bands; transverse veinlet clouded with darker brown; veins pale. Halteres white. Abdomen whitish, pilose, with a slight brown band on each segment. Legs whitish, long, and slender; fore tibiæ longer than the fore metatarsi by one-fourth; fore tarsi pilose. *Male.* Antennæ with brown plumes.

Not rare. (E.)

5. **punctipennis,** Meig. Zw. i. 61. 9 (1818); Fries; Meq.; Gim.; Stæg.; Zett.—*cinctus*, Panz.; Latr.; Meig. Klass. *Mas et Fœm.* cinereus, *thorace vittis quatuor albidis tribusque fuscescentibus*, alis albidis, guttis plurimis cinereis strigaque media nigricante, venis, halteribus pedibusque albis, femorum fascia subapicali, tibiis et tarsorum articulis apice nigris. Long. 3; alar. 5 lin.

Male and Fem. Grey. *Thorax with four whitish and three brownish stripes.* Wings whitish, with numerous grey dots, and with a blackish mark by the middle of the costa; veins, halteres, and legs white; femora with a black subapical band; tibiæ and joints of the tarsi with black tips. *Male.* Antennæ with brown plumes.

Generally distributed. (E. S. I.)

6. **carneus,** F. S. A. 41. 16 (1805); Meig.; Stæg.; Zett.—*albipes*, Fries; Meig. *Mas et Fœm.* palpis, antennis, halteribus pedibusque albidis, *thorace vittis tribus ferrugineis*, alis albidis, fasciis tribus cinereis; *Mas*, *albidus*, abdominis suturis fuscis; *Fœm. rufo-testaceus.* Long. $1\frac{1}{2}$–2; alar. $3\frac{1}{2}$–4 lin.

Palpi, antennæ, halteres, and legs whitish. *Thorax with three ferruginous stripes, the middle one subdivided.* Wings whitish, with three irregular grey bands; the first a little before the middle, the second slender and interrupted, the third subapical; veins pale. Legs slender; fore tibiæ longer than the fore metatarsi by one-fourth. *Male. Body whitish.* Plumes of the antennæ pale brown. Bands of the wings indistinct. Sutures of the abdominal segments brown. *Fem. Body reddish-testaceous.*

Rare. In the British Museum. (E.)

7. **zonatus,** F. Sp. I. ii. 408. 45 (1781); Gmel.; Meig. *Mas et Fœm. albido-testaceus, thorace vittis tribus rufescentibus*, alis albidis fasciis tribus pallidissimis subobsoletis fuscescentibus, venis halteribusque albis; *Mas*, abdomine pedibusque albidis, illo fasciis fuscis; *Fœm.* abdomine pedibusque albido-testaceis. Long. 2–3; alar. 4–5 lin.

Male and Fem. Whitish-testaceous. Thorax with three reddish stripes. Wings whitish, with three indistinct, incomplete, very pale brown bands; veins and halteres white. Legs very slender, rather long; fore tibiæ longer than the fore metatarsi by one-fourth. *Male.* Plumes of the antennæ pale brown, white towards the tips. Abdomen whitish, hairy, with a brown band on each segment. Legs whitish. *Fem.* Abdomen and legs whitish-testaceous.

Not rare. (E.)

8. **lætus,** Meig. Zw. i. 60. 7 (1818); Fries; Zett. *Fœm. testaceus*, antennis albidis, *thorace vittis tribus fuscis*, metathorace cinereo, alis albidis, maculis quatuor discalibus fuscescentibus, apicibus cinereo substrigatis, venis halteribusque albidis, pedibus testaceis, femoribus fascia subapicali nigricante. Long. $1\frac{1}{2}$–2; alar. 4 lin.

Fem. Testaceous. Antennæ whitish. *Thorax with three brown stripes, the middle one subdivided;* metathorax grey. Wings whitish, with four brownish discal spots, two in front and two behind; tips slightly streaked with grey; veins and halteres whitish. Legs pale testaceous, slender; femora with a blackish subapical band; fore tibiæ longer than the fore metatarsi by one-fourth.

Rare. In the British Museum. (E.)

9. **culiciformis,** F. Sp. I. ii. 411. 64 (1781); Gmel.; Meig.; Fries; Stæg.; Zett. *Fœm. fuscus, thorace vittis quatuor albidis*, alis albidis, macula postica fasciaque subinterrupta cinereis, venis halteribus pedibusque albis. Long. $\frac{3}{4}$; alar. 2 lin.

Fem. Brown. Thorax with four whitish stripes. Wings whitish, with a grey spot on the hind border at one-fourth of the length, and a grey

band a little beyond the middle; the band is narrower towards the hind border, and nearly interrupted in the disc; veins, halteres, and legs white.

Rare. In the British Museum. (E.)

10. **monilis,** L. F. S. 1763 (1761); F.; Gmel.; Latr.; Meig.; Fries; Meq.; Zett.; Gim.; Stæg.—*maculatus*, D. G; Latr. H. N. Cr. et Ins.; Meig. Klass. *Mas et Fœm.* cinereo-fuscus, thorace subvittato, alis albidis, maculis cinereis guttisque anticis nigricantibus, venis halteribus pedibusque albis, his annulis novem nigris; *Mas*, abdomine albido fasciis fuscis. Long. $1\frac{3}{4}$–3; alar. $3\frac{1}{2}$–5 lin.

Male and Fem. Greyish-brown. Thorax indistinctly striped. Wings whitish, with several grey spots, and in front with some blackish dots; veins, halteres, and legs white. Legs slender; femora with a black band near the tips; tibiæ with three black bands; tarsi with a black band at the tip of each joint; metatarsi with a black middle band; fore tibiæ longer than the fore metatarsi by one-half. *Male.* Antennæ with brown plumes. Abdomen whitish, with a brown band on each segment.

Generally distributed. (E. S. I.)

11. **plumipes?** Fries, Mon. Tan. 9. 1 (1823); Meig.; Stæg.; Zett. *Fœm. Piceus*, robustus, palpis antennisque nigris, *thorace subcano vittis tribus fuscis*, alis subcinereis nudis, venis halteribus pedibusque testaceis, venula transversa nigro-nebulosa. Long. $2\frac{1}{4}$; alar. 4 lin.

Fem. Piceous, rather stout. Palpi and antennæ black. *Thorax with a hoary tinge, which is interrupted by three brown stripes.* Wings greyish, bare; veins testaceous; transverse veinlet clouded with black. Halteres pale testaceous. Legs testaceous, slightly pubescent, rather long and slender; fore tibiæ longer by half than the fore metatarsi.

Rare. In the British Museum. (E.)

12. **notatus,** Meig. Zw. i. 58. 4 (1818); Stæg.; Zett. *Mas, canus*, palpis antennisque nigris, *thorace vittis tribus fuscis*, alis subcinereis pubescentibus, venis pallidis, venula transversa nigro-nebulosa, halteribus albis, *abdomine albido fasciis nigricantibus*, pedibus testaceis, tibiis et tarsorum articulis apice nigricantibus. Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Hoary. Palpi and antennæ black, the latter with brown plumes. *Thorax with three brown stripes.* Wings slightly greyish, pubescent; veins pale; discal transverse veinlet clouded with black. Halteres white. *Abdomen whitish*, pubescent, *with a blackish band on the fore border of each segment.* Legs testaceous, long, rather slender; tips of the tibiæ and of the joints of the tarsi blackish; fore tibiæ a little longer than the fore metatarsi.

Rare. In the British Museum. (E.)

13. **melanops,** Wied.; Meig. Zw. i. 65. 18 (1818); Meq.; Stæg.; Rs.; Zett. D. Sc.—*Arundineti?* L.; F.; Sehr.; Gmel.—*bicolor*, Fries; Meig.; Zett. I. L. *Mas et Fœm. pallide testaceus*, palpis, antennis, halteribus pedibusque albidis, thorace vittis tribus rufescentibus, *alis*

albo-limpidis pubescentibus, venis albis apud costam testaceis. Long. $1\frac{1}{2}$–$2\frac{1}{2}$; alar. 3–5 lin.

Male and Fem. Testaceous. Palpi, antennæ, halteres, and legs whitish. Thorax with three reddish stripes. *Wings limpid-white;* veins white, pale testaceous along the costa.

Not rare. (E.)

14. **ferrugineicollis,** Meg.; Meig. Zw. i. 64. 15 (1818); Mcq.; Rs.; Zett. D. Sc.—*tanypodipennis,* Fries, MSS.; Zett. I. L. *Fœm.* testaceus, thorace vittis tribus rufescentibus, *alis subcinereis* pubescentibus, venis pallidis. Long. $1\frac{1}{4}$; alar. $2\frac{1}{2}$ lin.

Fem. Testaceous. Antennæ pubescent. Thorax with three reddish stripes. *Wings greyish,* pubescent; veins pale. Abdomen pubescent. Legs rather long and slender; fore tibiæ a little longer than the fore metatarsi.

Rare. In the British Museum. (E.)

15. **melanurus,** Meig. Zw. i. 59. 5 (1818); Zett. *Mas, albidus,* thorace vittis tribus luteis, *alis limpidis* pubescentibus, venis pallidis, *abdominis suturis apiceque fuscescentibus.* Long. 3; alar. 5 lin.

Male. Whitish. Antennæ with testaceous plumes. Thorax with three luteous stripes. *Wings limpid;* pubescent; veins pale. *Abdomen* pubescent; *sutures of the segments and tip brownish.* Legs slender, slightly pubescent; fore tibiæ longer than the fore metatarsi by one-fourth.

Rare. In the British Museum. (E.)

16. **pusillus,** Meig. Zw. i. 62. 11 (1818). Niger, alis subcinereis; *Fœm.* thorace cinereo vittis nigris. Long. $\frac{2}{3}$; alar. $1\frac{1}{2}$ lin.

Black, very small. Wings greyish. *Fem.* Thorax grey, with black stripes.

Rare. In Mr. Haliday's collection. (I.)

17. **nervosus,** Hoffm.; Meig. Zw. i. 64. 14 (1818). *Fœm.* niger, nitens, crassus, alis sublimpidis, venis albidis apud costam fuscis, halteribus piceis, pedibus validis fulvis, femoribus tibiis tarsisque apice tibiisque anticis totis fuscis. Long. 3; alar. 6 lin.

Fem. Black, shining, very stout. Antennæ black. Wings nearly limpid; subcostal, mediastinal, and radial veins, and transverse veinlets brown, the other veins whitish. Halteres piceous. Legs stout, tawny; tips of the femora, of the tibiæ, and of the tarsi, and the whole of the fore tibiæ brown.

Rare. In the British Museum. (E.)

Genus VI. **CORYNONEURA.**

CORYNONEURA, Winn. Ent. Zeit. Stett. vii. 12 (1846). *Chironomus* p., Meig.; Zett.

Corpus elongatum, minimum. Caput rotundum, antice depressum. Oculi subrotundi, intus paullulum emarginati. Proboscis brevissima. Palpi 4-articulati, incurvi; articuli primus, secundus, et tertius æquales, cylindrici; quartus fere triplo longior. Antennæ porrectæ, filiformes. Thorax ovatus, convexus, antice subproductus. Scutellum parvum, rotundum. Alæ lanceolatæ, nudæ, deflexæ; costa brevissima, in clavæ formam dilatata. Abdomen cylindricum, segmentis octo. Pedes longi; tibiæ posticæ apice incrassatæ, supra unicalcaratæ, subtus bispinosæ. *Mas.* Antennæ 9-articulatæ, plumosæ; articuli octo ovati; nonus major, clavatus, apice pilis coronatus. Alarum costa circiter ad quartam partem marginis antici pertinens. Abdomen apice obtusum. *Fœm.* Antennæ 5-articulatæ, pilosæ; articuli quatuor ovati; quintus elongatus, pilis brevioribus coronatus quam maris. Alarum costa ad medium marginis antici pertinens.

Body elongated, very small. Head round, flat above. Eyes nearly round, slightly emarginated on the inner side. Proboscis very short. Palpi four-jointed, curved downward; first, second, and third joints cylindrical, equally long; fourth almost as long as the other three. Antennæ porrect, filiform, standing on a thick conical base. Thorax oval, convex, slightly elongated in front. Scutellum small, round. Metathorax elevated, forming an acute angle hindward. Pectus very convex between the anterior legs. Wings lanceolate, bare, deflexed; costa clavate, very short. Halteres large. Abdomen cylindrical, with eight segments. Legs long; hind tibiæ incrassated at the tips, with a long spur on the upper side, and two short stout spines beneath. *Male.* Antennæ nine-jointed, plumose; joints from the first to the eighth oval; ninth clavate, very large, with a circlet of hairs at the tip; costa one-fourth of the length of the wing. Abdomen obtuse at the tip. *Fem.* Antennæ five-jointed, pilose; joints from the first to the fourth oval; fifth elongated, its circlet of hairs shorter than those of the male. Abdomen acuminated at the tip.

1. **minutissima,** Meig. Zw. vii. 8. 137 (1838). *Mas, minuta,* Winn. Ent. Zeit. vii. 13.—*atra?* Winn. Ent. Zeit. xiii. 50.—*Fœm. celeripes?* Winn. Ent. Zeit. xiii. 50. *Mas,* nigra, proboscide, palpis, antennis halteribusque albido-flavis, antennis apice fuscescentibus, alis flavescentibus aut lacteis, clavo obscure flavo, abdomine viridi-albo apice fusco, pedibus fuscis, femoribus albis apice fuscis; *Fœm.* flava, antennis apice fuscis, thorace vittis tribus nigris, scutello et metanoto nigris, pectore nigro-fusco, alis albidis, halteribus albis, abdomine nigro incisuris albidis, ventre sordide flavo apice nigro, pedibus albidis, articulis apice obscuris. Long. $\frac{1}{4}$—$\frac{5}{12}$; alar. $\frac{1}{2}$—$\frac{5}{6}$ lin.

Male. Head and thorax black. Proboscis, palpi, antennæ, and halteres whitish-yellow; the last joints of the antennæ brownish. Wings yellowish; the clavus dark dingy yellow. Abdomen greenish-white; the last three segments, or only the tip, brown. Legs brown; femora white, with brown tips. Var. Pleuræ dingy yellow. Wings with milk-white gloss. Abdomen dark brown. *Fem.* Head black. Palpi yellow.

Antennæ yellow; last joint brown. Thorax yellow. Mesonotum with three very broad black stripes, occupying almost the whole breadth; the lateral pair abbreviated before, the middle one extending from the pronotum to the black scutellum. Metanotum black. Pectus black-brown. Wings with whitish gloss. Halteres white. Abdomen black, with narrow whitish incisures; under side dingy yellow, with the two last segments black. Legs whitish; tips of the joints, and three last joints of the hind tarsi brown.

Common from May to September about lakes and river. Runs about in curves and circles with great rapidity on the large stones on the banks. (E. S. I.)

2. **atomaria?** Zett. Dipt. Scand. ix. 3522. 40 (1850). *Mas*, atra, alis albis, clavo fusco basi pallido, venis halteribus pedibusque albidis; *Fœm.* flava, fronte verticeque nigro-fuscis, thoracis vittis tribus, scutello et metanoto fuscis, scutelli basi flavo, alis flavescentibus, clavo basi pallido apice fusco, halteribus pedibusque pallidis, abdomine fasciis pallide fuscis. Long. $\frac{5}{12}$; alar. $\frac{5}{6}$ lin.

Male. Deep black. Wings white; clavus brown, pale at the base; veins, halteres, and legs whitish. *Fem.* Yellow. Front and vertex blackish-brown. Whorl of the last joint of the antennæ very short. Mesonotum with three brown stripes, the middle one behind, the others before, abbreviated. Scutellum and metanotum brown, the former yellow at the base. Wings yellowish; clavus pale at the root, black-brown at the end. Halteres and legs pale. Abdomen with light brown bands on the hind borders of the segments.

Not rare about ponds, etc. (E. I.)

Obs. Corynoneura scutellata, Winn. (Ent. Zeit. Stett. vi. 13 (1846),) seems to differ from this in having a costal clavus like that of the preceding species. *Chironomus minutus,* Zett. (Dipt. Scand. 3522. 39), is probably a *Corynoneura,* differing from *C. minutissima,* the female being blackish, like the male.

Genus IV. **CERATOPOGON.**

CERATOPOGON, Meig. Klass. i. (1804); Wied.; Panz.; Mcq.; Gim.; Zett.; Stæg.; Rs.; Winn. *Culex* p., L.; F.; Gmel.; Meig. Klass.; Lam. *Tipula* p., Gmel. *Chironomus* p., F.; Latr. *Trichocera,* Lam. *Culicoides,* Latr. *Palpomyia,* Meg. *Serromyia,* Meg. *Forcipomyia,* Meg. *Sphæromias,* Steph.; Curt.; Hal. *Labidomyia,* Steph.

Corpus parvum aut minimum, pilosum aut nudum. Caput anticum sæpissime depressum. Oculi lunati, subreniformes. Proboscis porrecta, plus minusve producta, labro, lingua et maxillis corneis acuminatis. Palpi 4-articulati. Antennæ 13-articulatæ, filiformes;

articuli usque ad octavum breviores; nonus et sequentes longiores. Thorax subovatus, convexus, antice planus. Scutellum parvum. Metathorax brevissimus. Alæ incumbentes. Abdomen cylindricum, basi nonnunquam contractum. Pedes basi approximati; femora in nonnullis spinosa aut incrassata; tibiæ calcaratæ. *Mas.* Antennæ plumoso-barbatæ.

Body small, or very minute, pilose or bare. Head very generally depressed in front, produced into a very short rostrum. Eyes lunate, almost reniform. Proboscis more or less porrect, with fleshy labium, which is rounded in front. Labrum seated on the upper base of the labium, horny, flat, pointed, almost as long as the labium, including the horny and very sharp tongue, which generally is also almost as long as the labium, but in some species not more than two-thirds of its length. Maxillæ seated on the under base of the labium, horny, subfalcate, acuminated, generally as long as the labium. Palpi seated on each side of the base of the labium, four-jointed; first joint cylindrical; second generally longer, either cylindrical, or oval, or clavate, or obclavate; third and fourth either cylindrical or oval, shorter than the second, or the fourth as long as the second. Antennæ porrect, filiform, thirteen-jointed, longer than the head, and in some species almost as long as the body, seated on a thick basis; first and seven following joints globose or oval, sessile or petiolated; ninth and four following joints more or less elongated, oval, or elliptical, or cylindrical, beset with short hairs, and at the base with longer verticillate hairs. Thorax nearly oval, convex, flat in front of the scutellum, which is small. Metathorax very short. Wings parallel with the body in repose, lanceolate or oval, pilose or bare; subcostal vein ending much beyond half the length of the wing; radial ending towards the tip; cubital ending by the tip; subapical simple; subanal forked; anal not extending to the border. Abdomen cylindrical, with eight segments, in some species contracted at the base. Legs of almost equal length, approximate at the base; femora incrassated in some species, armed beneath with spines in many species; tibiæ sometimes slightly incrassated; joints of the tarsi varying in relative length; ungues and onychia also varying, and affording specific characters. *Male.* Antennæ bearing near the base a thick brush or plume of hairs. Abdomen with forceps at the tip.

The larvæ of some species are terrestrial; that of *C. bipunctatus* dwells under the bark of dead trees. It is cylindrical, with the segments rather constricted, and the fore part of the body rather thicker; the head is small and retractile, and each segment of the body has two clavate dorsal setæ. The pupa is shorter than the larva, and much broader in front, with two short lateral appendages. It is pale yellow, with distinct rudiments of wings and legs, shining, very slightly transparent, beset with bristles on each side, tapering from the head to the tail, which is slender, and as long as the rest

of the body. When disturbed, it moves its head and thorax quickly from side to side. The upper side of the pupa-case is slit open when the fly emerges.

The larva of *C. lateralis* inhabits manure, and has no clavate setæ, but is furnished with two pediform appendages on the prothorax and on the anal extremity; the pupa has also eight long filiform appendages on the back of the thorax. The sexes generally differ slightly in the disposition of the wing-veins, and these differences will be most clearly seen by referring to the excellent figures in Winnertz's elaborate monograph on this genus.

These flies are generally called Midges, and the females of some of them are blood-suckers, and are very annoying when they occur in great numbers. The species whose femora are armed with spines make a prey of other small insects, which they pierce with their sharp proboscis. The larvæ live in water, or in the earth, or under the bark of trees, and the transformation of *C. bipunctatus* has been frequently observed.

The following divisions are copied from Winnertz's monograph:—

A. Antennæ with the five last joints elongated.
- A. Wings with two cubital areolets, or (the first being confluent) with one, distant from the præbrachial.
  - *a*. Wings wholly or partly hairy, quite bare in the males of some species. Femora simple, unarmed.
    - *b*. Ungues with hairy onychia. Ungues of both sexes of equal length.
      - *c*. First tarsal joint shorter than the second, or both of equal length.—*Forcipomyia*, Megerle.—*Labidomyia*, Steph.
        - *d*. Subcostal vein united to the costal in the middle of the fore border, or before it. Species 1–4.
        - *d d*. Subcostal vein united to the costal between the middle of the fore border and the tip of the wing. Species 5–7.
      - *c c*. First tarsal joint longer than the second.
        - *d*. Subcostal vein united to the costal in the middle of the fore border or before it. Species 8–14.
        - *d d*. Subcostal vein united to the costal between the middle of the fore border and the tip of the wing. Species 15–27.
    - *b b*. Ungues with bristly hairs instead of onychia. Ungues of both sexes of equal length.
      - *c*. First tarsal joint longer than the second.
        - *d*. Subcostal vein united to the costal in the middle of the fore border or before it. Species 28.
        - *d d*. Subcostal vein united to the costal between the middle of the fore border and the tip of the wing.—*Culicoides*, Latr. Species 29–45.

b b b. Ungues without bristly hairs or onychia. One of the ungues (in the female only?) longer than the other. First tarsal joint longer than the second. Subcubital vein united to the cubital between the middle of the costa and the tip of the wing. Species 46.

a a. Wings quite bare. Subcostal vein united to the costal between the middle of the fore border and the tip of the wing.

b. Femora unarmed.

c. Ungues not denticulated.

d. Ungues of both sexes of equal length. Species 47, 48.

d d. Ungues of equal length, with a short claw by them in the female. Species 49.

d d d. With a claw in the female longer than the others. Species 50–53.

c c. Ungues (in the female only?) with a tooth on the inner side. Ungues of equal length. Species 54.

b b. Some, or all the femora, spinose on the under side.—*Palpomyia*, Megerle.

c. Ungues without spines.

d. Ungues of equal length in both sexes. Plantæ hairy. Species 55–58.

d d. One of the ungues longer than the other in the female. Plantæ hairy. Species 59.

c c. Ungues (of the female only?) with some spines on the inner side. Ungues of equal length.

d. Plantæ hairy. Species 60–63.

d d. Plantæ spinose.—*Sphæromias*, Steph.; Curt. Species 64, 65.

b b b. Hind femora incrassated, spinose beneath. Ungues without spines. One claw longer than the others.—*Serromyia*, Meg. —*Prionomyia*, Steph. Species 66.

A A. Wings with one cubital areolet, produced from the præbrachial to the costa. Wings bare. Subcostal vein united to the costal between the middle of the fore border and the tip of the wing.

a. Femora simple.

b. Ungues without spines. Species 67–70.

b b. Ungues with a spine on the inner side. Species 71.

b b b. Ungues with a small claw beneath. Plantæ spinose. Sp. 72.

a a. Some, or all the femora, spinose on the under side.

b. Ungues without spines. Species 73–76.

b b. Ungues of the female with a spine on the inner side. Species 77–81.

A A. Antennæ with the three last joints elongated. Species 82.

The species of *Ceratopogon* generally require to be well preserved and displayed, and highly magnified, in order to identify them with the characters by which Winnertz has described them,

and divided them into minor groups; these characters are mostly unnoticed by Meigen and by Zetterstedt. Their delicate structure is very easily injured, and I have not been able to ascertain clearly that all the species here described are British insects; but it is most probable that they will prove to be so.

1. **pallidus,** Winn.! Linn. Ent. vi. 15. 1. pl. 3. f. 1 (1852). *Mas et Fœm. fusco-cinereus,* pallide aureo-hirtus, palpis fuscis, *thoracis lateribus albido-lineatis,* pectore antico albo, halteribus fuscis basi albidis; *Mas,* antennarum fasciculis nigro-cinereis apice albicantibus, *alis limpidis albicantibus* cano-hirtis, venis pallidis ad costam fuscescentibus, pedibus albidis albo-hirtis; *Fœm.* antennarum articulis primo ad octavum albidis longiovatis, nono ad decimum tertium pallide fuscescentibus, alis limpidis nigro-cinereo-hirtis, pedibus flavescentibus flavido-hirtis. Long. 1; alar. 2 lin.

Male and Fem. Brownish-cinereous, clothed with pale gilded yellow hairs. Palpi brown. *Thorax with a whitish stripe on each side.* Pectus white in front. Halteres brown, whitish towards the base. *Male.* Pencils of the antennæ blackish-cinereous, with whitish reflections at the tips. *Wings whitish-limpid,* clothed with hoary hairs; veins pale, brownish towards the costa. Legs whitish, clothed with white hairs. *Fem.* Joints of the antennæ from the first to the eighth whitish, elongate-oval, from the ninth to the thirteenth pale brown. *Wings limpid,* with blackish-grey hairs. Legs yellowish, with yellowish hairs.

(E.?)

2. **regulus,** Winn.! Linn. Ent. vi. 16. 2. pl. 3. f. 2 (1852). *Mas et Fœm. niger, aureo-flavo-hirtus* nigroque setosus, pectoris lateribus anticis albo-unipunctatis, halteribus niveis, abdomine flavo-cinereo-hirto, genubus argenteo-punctatis, tibiis tarsisque piceis; *Mas,* antennarum fasciculis apice albicantibus, *alis albis* albo-hirtis, costa nigro-setosa; *Fœm. alis limpidis* nigro-cinereo-hirtis, femoribus tibiisque posticis nonnihil incrassatis. Long. $\frac{2}{3}$–$\frac{5}{6}$; alar. $1\frac{1}{3}$–$1\frac{2}{3}$ lin.

Male and Fem. Black, clothed with gilded yellow hairs and with black bristles. Palpi black. Tips of the antennæ with whitish reflections. Pectus in front of the wings with a white dot on each side. Halteres snow-white. Abdomen black or blackish-brown, clothed with long yellowish-grey hairs. Knees with a silvery dot. Tibiæ and tarsi piceous. *Male.* Plumes of the antennæ with whitish tips. *Wings white,* clothed with white hairs; costa with black bristles. *Fem. Wings limpid,* with blackish-grey hairs. Hind femora and hind tibiæ somewhat thickened.

(E.?)

3. **niger,** Winn.! Linn. Ent. vi. 17. 3. pl. 3. f. 3 (1852). *Mas et Fœm. niger, nigro-hirtus,* halteribus albis petiolo nonnunquam fuscescente, abdomine cano-piloso nonnunquam nigro-fusco, pedibus piceis,

pilis nigro-cinereis; *Mas, alis lacteis* albo-pilosis, costa nigra setosa, venis albis; *Fœm. alis limpidis* nigro-hirtis, margine postico albo-ciliato, gutta costali argentea, femoribus tibiisque posticis incrassatis. Long. $\frac{5}{6}$–1; alar. $1\frac{2}{3}$–2 lin.

Male and Fem. Black, shining, clothed with black hairs. Halteres white; petiole sometimes brownish. Abdomen occasionally brownish-black, its hairs blackish-grey, with whitish reflections. Legs piceous, with blackish-grey hairs. *Male.* Plumes of the antennæ with whitish reflections at the tips. Wings milk-white, with white hairs; costa black, bristly; veins white. *Fem.* Wings limpid, with black hairs; hind border with a white fringe; costa with a silvery white dot. Hind femora and hind tibiæ more or less incrassated.

(E.?)

4. **bipunctatus,** Linn. S. N. ii. 978 (1767); Gmel.; Meig.; Mcq.; Stæg.; Rs.; Zett. D. S.—*trichopterus*, Hoffm.; Meig. (1818);—Winn.! Linn. Ent. vi. pl. 3. f. 4.—*geniculatus*, Guér.—*hirtulus*, Zett. I. L. *Mas et Fœm. piceus, thorace flavido-hirto*, pectore antico albido, *alis* hyalinis cinereo-hirtis, *puncto basali guttaque media costali albis*, halteribus flavis, abdomine cano-hirto, pedibus albido-hirtis; *Mas*, antennarum pluma apice flavido-alba, abdominis incisuris albidis. Long. $\frac{5}{6}$–1; alar. $1\frac{2}{3}$–2 lin.

Male and Fem. Piceous. Thorax thinly clothed with yellowish hairs. Pectus whitish in front, and with yellowish streaks on each side. *Wings* hyaline, clothed with greyish hairs, *with a white dot beyond the middle of the costa;* veins brown towards the costa. Halteres yellow. Abdomen with hoary hairs. Legs clothed with long white hairs. *Male.* Plumes of the antennæ yellowish-white towards the tips. Wings and legs paler than those of the females. Abdominal segments with white sutures. *Fem.* Femora and tibiæ more or less thickened.

Generally distributed. (E. S. I.)

5. **Kaltenbachii,** Winn.! Linn. Ent. vi. 19. 5. pl. 3. f. 5 (1852). *Mas et Fœm. nigro-cinereus*, thorace flavido-hirto, vitta laterali sordide flava, scutello sæpissime flavido-marginato, pectore antico albido, *alis hyalinis cinereo-hirtis*, venis pallide fuscis apud costam obscurioribus, halteribus abdominisque incisuris albidis, pedibus sordide albo-flavis; *Mas*, antennarum pluma apice albida, tibiis posticis nonnihil incrassatis; *Fœm.* antennis flavo-fuscis, femoribus tibiisque posticis incrassatis. Long. 1–$1\frac{1}{4}$; alar. 2–$2\frac{1}{2}$ lin.

Male and Fem. Blackish-grey. Thorax clothed with short yellowish hairs, with a yellowish stripe along each side. Scutellum fringed with long black yellow-glistening hairs, generally with a yellow border. Pectus whitish in front. *Wings hyaline, clothed with grey hairs;* veins pale brown, darker towards the costa. Halteres white or whitish-yellow. Abdomen with whitish sutures. Coxæ whitish-yellow; legs darker, clothed with long brownish yellow-glistening hairs; hind femora occasionally brown at the tips. *Male.* Plumes of the antennæ whitish at

the tips. Hind tibiæ somewhat incrassated. *Fem.* Antennæ yellowish-brown. Hind femora and hind tibiæ incrassated.

The larva feeds on the extravasated sap of the poplar. (E.?)

6. **piceus,** Winn.! Linn. Ent. vi. 21. 6. pl. 3. f. 6 (1852). *Mas et Fœm. nigro-piceus, pectoris lateribus nitidis, alis hyalinis nigro-hirtis, basi fasciculoque costali trigono albidis,* venis pallide fuscis apud costam obscurioribus, halteribus abdominisque incisuris albidis, *pedibus nigro-piceis,* tarsis albo-flavis, articulis apice fuscis; *Mas,* antennarum pluma apice albida, tibiis posticis nonnihil incrassatis; *Fœm.* obscurior, antennis flavo-fuscis, femoribus tibiisque posticis incrassatis. Long. 1–1¼; alar. 2 lin.

Male and Fem. Much resembles *C. Kaltenbachii. Piceous, almost black. Sides of the pectus shining. Wings hyaline, with black down, the base and a triangular costal tuft whitish;* veins pale brown, darker towards the costa. Halteres and sutures of the abdomen whitish. *Legs blackish-piceous;* tarsi whitish-yellow, their joints with brown tips. *Male.* Plumes of the antennæ glistening-whitish towards the tips. Hind tibiæ somewhat incrassated. *Fem.* Darker than the male. Antennæ yellowish-brown. Wings very thickly clothed with black hairs.

(E.)

7. **ciliatus,** Winn.! Linn. Ent. vi. 21. 7. pl. 3. f. 7 (1852). *Fœm. niger,* flavo-albo-hirto, antennis apices versus albido-pilosis, *alis hyalinis nigro-cinereo-pubescentibus,* venis fuscis apud costam nigris, halteribus albis, ventre nigro-fusco basi sordide flavo, pedibus piceo-fuscis flavido-pilosis, tarsis albidis apice piceis. Long. 1–1⅙; alar. 2 lin.

Fem. Black. Antennæ clothed with black hairs, which are glistening-white towards the tips; joints from the first to the eighth thick, oval; the other five elliptical. Thorax shining, occasionally piceous, beset with short yellow or yellowish-white hairs; a whitish-yellow fleck on each side of the pectus before the wings, on the fore pectus, and on the fore coxæ. *Wings hyaline, with blackish-grey pubescence;* veins brown, black towards the costa. Halteres white. Abdomen clothed with short yellowish-white hairs; under side blackish-brown, dingy-yellow or brown towards the base. Legs piceous-brown, with yellowish hairs; femora and tibiæ very slightly incrassated; *tibiæ fringed with pointed lancet-like scales;* first, second, and third joints of the tarsi whitish.

Not common. (E.)

8. **crassipes,** Winn.! Linn. Ent. vi. 22. 8. pl. 3. f. 8 (1852). *Mas et Fœm. nigro-cinereus, thorace flavo nigroque piloso,* scutello nigro-hirto, alis albidis cinereo-hirtis, venis pallidis apud costam fuscis, halteribus albis, abdomine pedibusque nigro-fuscis nigro-cinereo-pilosis, femoribus tibiisque robustis, tarsis albo-flavis apice nigro-fuscis; *Mas,* antennarum plumis apice albo-nitentibus; *Fœm.* antennis flavidis, apice fuscis. Long. ¾–1; alar. 2 lin.

Male and Fem. Black. Thorax blackish-grey, clothed with short yellow and long black hairs. Scutellum with black hairs. Sides of the pectus in front, and fore pectus, with dingy-white marks. Wings whitish; their hairs grey, brownish in front; veins pale, brown towards the costa. Halteres white. Abdomen and legs blackish-brown, clothed with long blackish-grey or almost black hairs. Femora and tibiæ rather thick; tarsi a whitish-yellow, with blackish-brown tips. *Male.* Plumes of the antennæ with glistening-white tips. *Fem.* Antennæ yellowish; the five apical joints brown.

Not common. (E.)

9. **lepidus,** Winn.! Linn. Ent. vi. 23. 9. pl. 3. f. 7 (1852). *Mas, niger,* capite postico nigro-hirto, antennarum plumis apice albo-nitentibus, *thorace subnitido submetallico-viridi* aurato-hirto nigro-setoso, pectoris lateribus obscure piceis, alis hyalinis cano-pilosis, venis fuscescentibus apud costam nigro-fuscis, halteribus albis nigro-petiolatis, abdomine nigro-fusco, pilis longis albo-flavis, pedibus piceo-fuscis, femoribus tibiisque vix incrassatis, tarsis albidis albo-flavo-pilosis, articulis apice fuscis. Long. 1; alar. 2 lin.

Male. Black. Hind part of the head with black hairs. Plumes of the antennæ glistening-white towards the tips. *Thorax slightly shining, with a tinge of metallic green,* clothed with gilded hairs; sides, shoulders, and border of the scutellum with long black bristles; sides of the pectus piceous, dull. Wings hyaline, appearing whitish on a dark ground, clothed with hoary down; veins brownish, blackish-brown towards the costa. Halteres black, with white knobs. Abdomen blackish-brown, clothed with long whitish-yellow hairs; under side with grey, yellowish-glistening. Legs piceous-brown; femora and tibiæ hardly incrassated; tarsi whitish, clothed with whitish-yellow hairs, their joints with brown tips.

(E.?)

10. **brevipennis,** Mcq. H. N. D. i. 123. 7 (1834); Meig.; Winn.! Linn. Ent. vi. pl. 3. f. 10. *Mas et Fœm. niger, nitidus,* pectoris lateribus pectoreque antico flavo-albo-notatis, *thorace pilis nonnullis nigris, alis albidis* cano-pilosis, venis pallide fuscis apud costam obscurioribus, abdomine pilis longis densis nigris vestito, pedibus nigro-hirtis, tarsis nonnunquam pallidis; *Mas,* antennarum plumis apice albidis; *Fœm.* alis abbreviatis, pilis densioribus obscurioribus, abdomine lato.

Male and Fem. Black, shining. A little dingy whitish-yellow tuft on each side of the pectus, before the wings, and on the fore pectus. *Thorax thinly covered with black hairs.* Wings whitish, with hoary hairs; veins pale brown, darker towards the costa. Abdomen thickly clothed with long black hairs. Legs with black hairs, occasionally piceous; tarsi often tawny or yellow. *Male.* Plumes of the antennæ glistening-white towards the tips. *Fem.* Joints of the antennæ from the first to the eighth cylindrical, from the ninth to the thirteenth oval, the latter with white-glistening hairs. Wings obtuse oval, shorter and

broader than those of the male, their hairs darker and thicker. Abdomen broad.

(E.)

11. **tenuis,** Winn.! Linn. Ent. vi. 25. 11. pl. 4. f. 11 (1852). *Mas, nigro-cinereus, nigro-hirtus,* antennarum plumis apice albidis, *thorace subobscuro,* alis albidis cinereo-hirtis, venis pallidis apud costam fuscis, halteribus albis, petiolis nigricantibus, abdomine nigro-fusco, pedibus nigris subnitidis, tarsis flavido-albis apice fuscescentibus.

Male. Blackish-grey, clothed with black hairs. Head and palpi black. Plumes of the antennæ glistening-white towards the tips. *Thorax hardly shining.* Wings whitish, with grey hairs; veins pale, brown towards the costa. Halteres blackish, with white knobs. Abdomen blackish-brown, with some short white hairs amongst the long black hairs on the back. Legs black, somewhat shining, clothed with black hairs; tibiæ slightly incrassated; tarsi yellowish-white, with more or less brown tips.

(E.?)

12. **divaricatus,** Winn.! Linn. Ent. vi. 25. 12. pl. 4. f. 12 (1852). *Mas, ater,* antennarum plumis apice albidis, *thorace nitido nudo lato,* pectoris lateribus flavido-notatis, alis hyalinis subalbidis cinereo-pilosis, venis pallidis apud costam fuscis, halteribus albis, abdomine nigro-fusco cinereo-piloso, ventre fulvo, pedibus pallide fuscescentibus, tarsis subalbidis, articulis apice nigris. Long. $\frac{2}{3}$; alar. $1\frac{1}{3}$ lin.

Male. Deep black. Plumes of the antennæ glistening-white towards the tips. *Thorax broad, bare, shining.* A little dingy yellowish tuft on each side of the pectus before the wings. Wings hyaline, somewhat whitish, with grey hairs; veins pale, brown towards the costa. Halteres white. Abdomen blackish-brown, thinly covered with grey hairs; under side tawny. Legs pale brown; tarsi more whitish.

(E.?)

13. **alacer,** Winn.! Linn. Ent. vi. 25. 13. pl. 4. f. 13 (1852). *Mas, ater,* antennarum plumis apice albidis, *thorace nitido pilis nigris, alis hyalinis* cano-pilosis, venis pallidis apud costam fuscescentibus, halteribus sordide albis fusco-petiolatis, abdomine nigro-fusco, pilis longioribus canis, pedibus pallidis subpiceis, tarsis pallidioribus. Long. $\frac{2}{3}$; alar. $1\frac{1}{3}$ lin.

Male. Deep black. Plumes of the antennæ glistening-white towards the tips. *Thorax clothed with black hairs, with a greyish tinge in some aspects. Wings hyaline,* whitish when seen on a dark surface, with grey white-glistening hairs; veins pale, distinct, brownish towards the costa. Halteres brown, with dingy white knobs. Abdomen almost blackish-brown, with rather long grey white-glistening hairs. Legs pale, somewhat piceous; tarsi paler than the other parts.

(E.)

14. **murinus,** Winn.! Linn. Ent. vi. 26. 14. pl. 4. f. 14 (1852).

Mas et Fœm. murinus, scutello fulvo aut fulvo-marginato, pectoris lateribus nigricantibus subnitidis, notis duabus lateralibus sordide fulvis, alis hyalinis subalbidis cano-pilosis, venis plus minusve fuscis, halteribus albis, abdomine nigro-fusco, pilis longis albo-flavis, *pedibus albidis* albido-pilosis, tarsorum articulis apice nigris; *Mas*, antennarum plumis nigro-cinereis apice albidis; *Fœm.* alis obscurioribus pilosioribus. Long. $\frac{2}{3}$–$\frac{3}{4}$; alar. $1\frac{1}{3}$ lin.

Male and Fem. Mouse-colour, dull. Antennæ blackish-grey. *Scutellum generally tawny*, clothed with yellow hairs, with which some black hairs are intermixed, *occasionally black, with a tawny border*, and clothed with black hairs. Sides of the pectus blackish, somewhat shining, with a dingy tawny mark on each side before the base of the wings. Wings hyaline, slightly whitish, clothed with hoary hairs, which are thickest towards the costa; veins more or less brown. Halteres white. Abdomen blackish-brown, with long whitish-yellow hairs. Legs whitish, clothed with whitish hairs, which are very long beneath the tibiæ and the tarsi; joints of the tarsi with black tips. *Male.* Plumes of the antennæ blackish-grey, glistening-white towards the tips. *Fem.* Joints of the antennæ oval, the five last rather broader and longer and more acuminated than the preceding eight. Wings darker, and more thickly hairy than those of the male.

(E.)

15. **titillans,** Winn.! Linn. Ent. vi. 27. 15. pl. 4. f. 15 (1852). *Fem. ater, palpis flavo-fuscis, antennis fuscescentibus, thorace nitido pilis flavido-albis, alis hyalinis cinereo-hirtis, halteribus albis, abdomine nigro albo-hirto, pedibus albidis pilis concoloribus.* Long. $\frac{1}{2}$; alar. 1 lin.

Fem. Head and thorax deep black. Palpi yellowish-brown. Antennæ brownish, with yellowish-grey hairs; joints from the first to the fourth cylindrical, the next four of a more oval form, the five last broader, oval, somewhat elongated. *Thorax shining, clothed with moderately long, yellowish-white hairs. Wings hyaline, thickly covered with grey hairs. Halteres white. Abdomen black, with white hairs. Legs whitish, with hairs of the same colour.*

Not common. (E.)

16. **saltans,** Winn.! Linn. Ent. vi. 27. 16. pl. 4. f. 16 (1852). *Fœm. obscure fuscus, subcinereus, albido-pilosus, antennis pallide fuscis albo-hirtis, palpis nigris, alis hyalinis cinereo-hirtis, halteribus albis, pedibus albo-flavis, femoribus tibiisque posticis apice nigris.* Long. $\frac{1}{2}$; alar. 1 lin.

Fem. Dark brown, somewhat greyish, clothed with short downy whitish hairs. Palpi black. Antennæ pale brown, clothed with white hairs; joints from the first to the eighth cylindrical, from the ninth to the thirteenth elongate, oval. *Wing hyaline, clothed with grey hairs. Halteres white. Legs whitish-yellow; hind femora and hind tibiæ with black tips.*

(E.?)

17. **halteratus,** Winn.! Linn. Ent. vi. 28. 17. pl. 4. f. 17 (1852). *Mas, ater,* antennarum pluma apice albo-nitente, *thorace nitido, alis hyalinis nigro-cinereo-pilosis,* venis pallidis apud costam fuscescentibus, vena costali setosa, *halteribus apice lacteis, abdomine nigro-fusco, pilis nigro-cinereis, pedibus albido-pilosis, femoribus piceis, tibiis pallidioribus, tarsis albidis.* Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Male. Black. Plumes of the antennæ glistening-white towards the tips. *Thorax deep black, shining. Wings hyaline, with blackish-grey hairs;* veins pale, brownish towards the costa; costal vein setose. *Halteres with the apical half of the club milk-white. Abdomen blackish-brown, clothed with blackish-grey hairs. Legs clothed with long whitish hairs; femora piceous; tibiæ paler; tarsi whitish; tips of their joints darker.*

Not common. (E.)

18. **velox,** Winn.! Linn. Ent. vi. 28. 18. pl. 4. f. 18 (1852). *Fœm. niger, obscurus, nigro-hirtus, alis hyalinis nigro-hirtis,* vena costali valida obscure nigra, *halteribus albis nigro-petiolatis, pedibus piceis, tarsis flavescentibus.* Long. $\frac{1}{2}$; alar. 1 lin.

Fem. Black, not shining, clothed with black hairs. Antennæ brown, with black hairs, those of the last five joints glistening-white; five basal joints cylindrical, the three following more oval, the fifth apical, long, elliptical. *Wings hyaline, clothed with black hairs;* costal vein thick, black. *Halteres with white knobs.* Hairs of the abdomen and of the legs glistening-hoary. *Legs piceous; tarsi yellowish.*

Rare. (E.)

19. **frutetorum,** Winn.! Linn. Ent. vi. 29. 19. pl. 4. f. 12 (1852). *Mas et Fœm. niger, thorace subnitido albido-pubescente, alis hyalinis albido-hirtis,* venis pallidis apud costam fuscescentibus, *halteribus apice albis, abdomine obscure nigro-fusco albido-piloso, pedibus pallide piceis albido-hirtis, tarsis pallidioribus; Mas,* antennarum plumis albidis; *Fœm.* antennis albo-pilosis. Long. $\frac{1}{3}$–$\frac{1}{2}$; alar. $\frac{2}{3}$ lin.

Male and Fem. Black. Third and fourth joints of the palpi occasionally yellowish. *Thorax somewhat shining, covered with short whitish down,* which appears greyish in some aspects. *Wings hyaline,* appearing glistening-white when seen on a dark surface, *clothed with whitish hairs;* veins pale, brownish towards the costa. *Halteres with the apical half, or the whole, of the club milk-white. Abdomen dull blackish-brown, clothed with long whitish hairs. Legs pale piceous, furnished with long whitish hairs; tarsi pale. Male.* Plumes of the antennæ glistening-white towards the tips. *Fem.* Antennæ with white hairs; joints almost cylindrical, closely joined together, the five last somewhat elongated. Wings hardly glistening-white, their clothing generally thicker and darker than that of the male.

(E.)

20. **sylvaticus,** Winn.! Linn. Ent. vi. 29. 20. pl. 4. f. 20 (1852).

Mas, fusco-niger, palpis nigris, antennarum plumis nigris apice albidis, *thorace nitido, alis hyalinis*, apice pubescentibus, venis pallidis distinctis apud costam fuscis, *halteribus sordide albo-flavis, abdominis apice cano-pubescente, pedibus albido-flavis albido-hirtis.* Long. $\frac{2}{3}$; alar. $1\frac{1}{4}$ lin.

Male. Brownish-black. Palpi black. Plumes of the antennæ black, glistening-white towards the tips. *Thorax shining*, with a glistening grey hue in some aspects. *Wings hyaline*, glistening milk-white when seen on a dark surface, *with a few little hairs near the tips;* veins pale, but distinct, brown towards the costa. *Halteres dingy whitish-yellow. Abdomen blackish-brown*, with *short hoary down at the tip. Legs whitish-yellow, with short whitish hairs.*

(E.?)

21. **forcipatus,** Winn.! Linn. Ent. vi. 30. 21. pl. 4. f. 21 (1852). *Mas, nigro-fuscus, palpis nigris*, antennarum plumis apice flavescentibus, *thorace subnitido flavescente-hirto, alis hyalinis nudis, halteribus lacteis, petiolis flavescentibus, abdomine obscuro fusco-piloso apice obtuso forcipibus maximis fusco-flavis, pedibus fuscescente-flavis.* Long. $\frac{2}{3}$; alar. $1\frac{1}{4}$ lin.

Male. Blackish-brown. Palpi black. Plumes of the antennæ glistening-yellowish towards the tips. *Thorax somewhat shining, with yellowish hairs*, which appear yellowish-grey in some aspects. *Wings limpid, bare. Halteres yellowish, with milk-white knobs. Abdomen dull, with brown hairs, glistening-whitish towards the tip, which is obtuse, and is furnished with a pair of very large brownish-yellow forceps. Legs brownish-yellow.*

(E.?)

22. **lucorum,** Meig. Zw. i. 72. 9 (1818); Mcq.; Winn.! Linn. Ent. vi. pl. 4. f. 22. *Mas et Fœm. fuscus aut nigro-fuscus, albido-hirtus, thorace subnitido, alis hyalinis*, venis pallidis apud costam paullo obscurioribus, *halteribus niveis, pedibus flavescentibus aut ferrugineis albo-hirtis; Mas*, alis apice pubescentibus; *Fœm.* alis fere totis pubescentibus. Long. $\frac{2}{3}$–$\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Male and Fem. Black or blackish-brown, clothed with whitish hairs. Thorax somewhat shining, its hairs appearing grey in some aspects. *Wings hyaline;* veins pale but distinct, rather darker towards the costa. *Halteres snowy-white; their petioles generally brownish. Legs yellowish or ferruginous, clothed with white hairs. Male.* Wings appearing milk-white in a shaded aspect, pubescent towards the tips. *Fem.* Wings almost wholly pubescent.

Not rare. (E.)

23. **rostratus,** Winn.! Linn. Ent. vi. 31. 23. pl. 4. f. 23 (1852). *Mas et Fœm. cinereo-fuscus, proboscide elongata*, antennarum pilis apice albo-nitentibus, *thorace flavo-hirto, scutello setis nonnullis nigris ciliato, pectoris lateribus abdomineque nigro-fuscis, hoc cinereo-hirto, alis hyalinis*, venis pallidis apud costam fuscis, *halteribus lacteis, petiolis fuscescentibus, pedibus ferrugineis; Mas*, antennis nigro-fuscis, alis nudis; *Fœm.* antennis fuscis, alis apices versus subpilosis. Long. $\frac{3}{4}$–1; alar. 2 lin.

Greyish-brown. Proboscis elongated. Thorax slightly clothed with

short yellow hairs. Scutellum fringed with a few black bristles. Wings hyaline; veins pale, brown towards the costa. *Halteres brownish, with milk-white knobs. Abdomen clothed with grey hairs, which are long towards its tip. Legs ferruginous. Male.* Antennæ and their plumes blackish-brown, the latter glistening-white towards their tips. Wings bare. *Fem.* Antennæ brown, the eight basal contracted cylindrical joints with grey hairs, the five long elliptical joints with whitish hairs. Wings somewhat hairy towards the tips.

Not rare. (E.)

24. **brunnipes,** Meig. Zw. i. 71. 7 (1818); Stæg.; Zett.; Winn.! Linn. Ent. vi. pl. 5. f. 24. *Mas et Fœm. nigro-fuscus, thorace subnitido pilis flavescentibus, scutello setis nonnullis nigris, alis subcinereis,* venis apud costam nigro-fuscis, *halteribus lacteis, abdomine nigro-fusco obscuro cano-piloso, pedibus ferrugineis; Mas,* antennarum pluma nigra apice vix albo-micante, alis nudis; *Fœm.* pallidior, antennis fuscis nigro-hirtis, alis apices versus pubescentibus. Long. $\frac{3}{4}$–1; alar. 2 lin.

Male and Fem. Blackish-brown. Thorax slightly shining, clothed with yellowish hairs, which appear brown in some aspects. *Scutellum with some black bristles. Wings greyish;* veins towards the costa blackish-brown, the rest paler. *Halteres milk-white. Abdomen blackish-brown, dull, clothed with hoary hairs. Legs ferruginous. Male.* Plumes of the antennæ black, slightly glistening-white at the tips. Wings bare. *Fem.* Paler than the male. Antennæ brown, with black hairs; joints from the first to the eighth nearly oval, the five following elongate-elliptical, their hairs glistening-hoary. Wings pubescent towards the tips.

Not rare. (E.)

25. **pavidus,** Winn.! Linn. Ent. vi. 33. 25. pl. 5. f. 25 (1852). *Mas et Fœm. nigro-fuscus, subnitidus, thorace pilis nonnullis nigris vestito, alis hyalinis,* venis pallidis, *abdomine pilis fuscis albido-nitentibus vestito; Mas,* venis apud costam pallide fuscescentibus, *halteribus fuscis, capitulis sordide albis, femoribus tibiisque ferrugineis apice fuscis, tarsis pallidioribus; Fœm. venis apud costam halteribusque fuscis, pedibus flavis.* Long. $\frac{1}{2}$–$\frac{3}{5}$; alar. 1 lin.

Male and Fem. Blackish-brown, slightly shining. Thorax of a dull greyish hue when seen in some aspects, *almost bare, with very few short black hairs, and with some longer black hairs on the border of the scutellum. Wings hyaline, pubescent at the tips;* discal veins pale. *Abdomen clothed with brown whitish-glistening hairs. Male. Veins towards the costa pale brownish. Halteres dingy-white, with brown petioles. Femora and tibiæ ferruginous, with brown tips; tarsi paler. Fem. Veins towards the costa and halteres brown. Legs yellow.*

(E.?)

26. **fuscus,** Meig. Zw. i. 71. 6 (1818); Zett.; Winn.! Linn. Ent. vi. pl. 5. f. 26. *Mas, niger,* antennarum plumis nigro-fuscis apice flavidis, *thorace nitido pilis flavidis, alis hyalinis nudis,* venis pallidis apud

costam fuscis, *halteribus sordide flavidis, abdomine nigro-fusco fusco-piloso, pedibus ferrugineis.* Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Male. Black. Plumes of the antennæ blackish-brown, glistening-yellow towards the tips. *Thorax shining, with yellowish hairs,* which appear yellowish-grey in some aspects. *Wings hyaline, bare;* veins pale, brown towards the costa. *Halteres dingy yellow, almost brown. Abdomen blackish-brown, dull,* clothed with brown hairs, which have a glistening-whitish tinge towards the tip. *Legs ferruginous.*

Not rare. (E.)

27. **minutus,** Meig. Zw. vi. 263. 49 (1830); Stæg.; Zett.; Winn.! Linn. Ent. vi. pl. 5. f. 27. *Mas, nigro-fuscus, palpis flavis,* antennis fuscis plumis pallidis, *thorace nitido flavido-piloso, alis hyalinis nudis* apice vix pubescentibus, venis pallidis apud costam fuscis, *halteribus lacteis, abdomine fusco obscuro cano-piloso, pedibus albo-flavis.* Long. $\frac{1}{2}$; alar. 1 lin.

Male. Blackish-brown. Palpi yellow. Antennæ pale brown, clothed with pale hairs; joints from the first to the eighth compact, cylindrical, the five following elliptical. *Thorax shining, clothed with yellowish hairs. Wings hyaline, bare, except a few hairs in front of the tips;* veins brown towards the costa, the rest pale. *Halteres milk-white. Abdomen brown, dull, with hoary hairs. Legs whitish-yellow.*

Not rare. (E.)

28. **sericatus,** Winn.! Linn. Ent. vi. 34. 28. pl. 5. f. 28 (1852). Niger, nigro-hirtus, antennarum plumis apice albidis, alis hyalinis cinereo-hirtis, venis pallidis apud costam fuscis, halteribus nigro-fuscis, pedibus piceis, tarsis sordide albidis. Long. $\frac{2}{5}$; alar. $\frac{3}{4}$ lin.

Male. Black, clothed with black hairs. Plumes of the antennæ glistening-white towards the tips. Wings hyaline, whitish when seen on a dark surface, clothed with grey white-glistening hairs; veins pale, brown towards the costa. Halteres blackish-brown. Legs more or less dark piceous; tarsi dingy whitish.

(E.?)

29. **amœnus,** Winn.! Linn. Ent. vi. 35. 29. pl. 5. f. 29 (1852). *Mas, piceus,* antennarum plumis fuscis albo-nitentibus, *palpis fuscis, alis hyalinis, venis albis, halteribus niveis, abdominis incisuris albidis, pedibus albidis, femorum et tibiarum apicibus extremis pallide fuscis.* Long. $\frac{1}{2}$; alar. 1 lin.

Male. Piceous. Palpi brown. Plumes of the antennæ brown, glistening snowy-white. *Thorax with glistening-white down. Wings hyaline;* veins pale, appearing white in a shaded aspect. *Halteres snowy-white. Sutures of the abdominal segments whitish. Legs whitish; extreme tips of the femora and of the tibiæ pale brown.*

Rare. (E.)

30. **varius,** Winn.! Linn. Ent. vi. 35. 30. pl. 5. f. 30 (1852). *Mas et Fœm. fuscus, palpis flavis, thorace nigro-hirto disco cinereo, hal-*

teribus albis, abdominis incisuris albidis, pedibus albo-flavis, genubus tibiisque apice nigro-punctatis; Mas, antennarum plumis auratis, *alis cinereo-trifasciatis; Fœm.* antennis albido-pilosis, *alis cinereis limpido-trifasciatis.* Long. $\frac{1}{2}$–$\frac{2}{3}$; alar. $1\frac{1}{4}$–$1\frac{1}{2}$ lin.

Male and Fem. Brown. Palpi yellow. Thorax with black hairs; disc tinged with grey. Halteres white. Abdomen and legs clothed with grey white-glistening hairs. Abdomen paler than the thorax, with whitish sutures. Legs whitish-yellow; knees and tips of the tibiæ with black punctures. Male. Plumes of the antennæ gilded. *Wings limpid, with three grey bands,* the first and the third with some brown dots. *Fem.* Antennæ brownish, with white-glistening hairs; joints from the first to the eighth oval, the other five elongated, elliptical. *Wings grey, with three limpid bands,* the first and the second interrupted, the third apical.

Rare. (E.)

31. **fascipennis,** Stæg. Kroy. Nat. Tids. ii. 594. 14 (1839); Zett.; Winn.! Linn. Ent. vi. pl. 5. f. 31. *Mas et Fœm. flavo-cinereus; palpis fusco-flavis, scutello flavo aut flavo-marginato, alis subcinereis aut fuscescentibus fasciis duabus abbreviatis anticis vittaque postica basim versus albis, halteribus albis, abdomine obscure fusco, pedibus pallidis, genubus et nonnunquam tibiis apice nigro-punctatis; Mas,* antennarum plumis fuscis auratis; *Fœm.* antennis albidis apice nonnunquam pallide fuscis. Long. $\frac{1}{2}$–$\frac{2}{3}$; alar. 1 lin.

Male and Fem. Yellowish-cinereous. Palpi brownish-yellow. Scutellum yellow, or with a yellow border. Wings greyish or brownish, with two short white bands in front; the first about the middle, extending from the costa to full half the breadth; the second nearer the tip, not more than one-fourth of the breadth of the wing; a white streak along the hind border near the base. Halteres white. Abdomen dark brown, occasionally yellowish at the base and beneath in the living insect. Legs pale; knees, and in some cases the tips of the tibiæ, with black dots. Male. Plumes of the antennæ gilded-brown. *Fem.* Antennæ whitish, clothed with whitish hairs, occasionally pale brown towards the tips; joints from the first to the eighth oval, from the ninth to the thirteenth elongate-elliptical. Wings almost oval, darker and more hairy than those of the male.

(E.)

32. **pictipennis,** Stæg. Kroy. Naturh. Tidskr. ii. 594. 14 (1839); Zett.; Winn.! Linn. Ent. vi. pl. 5. f. 32. *Mas et Fœm. cinereus, palpis fuscescentibus, antennis fuscis, thorace vitta lata fasciaque fuscis, alis purpureo-fuscis guttis limpidis, halteribus albis, abdomine nigro-fusco, pedibus pallide fuscescentibus, genubus nigris, tibiis nonnunquam apice obscuris, tarsis albidis.* Long. $\frac{2}{3}$–$\frac{3}{4}$; alar. $1\frac{1}{4}$–$1\frac{1}{2}$ lin.

Male and Fem. Cinereous. Palpi brownish. Antennæ brown. Thorax with a broad brown stripe, and an equally broad brown band; some spines on each side by the base of the wings; it is clothed with black yellow-glistening hairs. *Wings purplish-brown, with several limpid and brown*

spots. Halteres white. Abdomen blackish-brown, clothed with greyish hairs, which are longer than those of the thorax. *Legs pale brown; femora and tibiæ with a white ring near the knees, which are black; tibiæ sometimes with dark tips; tarsi whitish. Male.* Plumes of the antennæ brown, glistening-white towards the tips. Second joint of the tarsi slender. *Fem.* Second joint of the tarsi stout, almost oval. Antennæ brownish, darker towards the tips; joints from the first to the eighth oval, the five last long, elliptical. Wings pubescent, darker than those of the male; veins distinct, blackish-brown towards the costa.

Rare. (E.)

33. **arcuatus,** Winn.! Linn. Ent. vi. 39. 33. pl. 5. f. 33 (1852). *Mas et Fœm. flavo-cinereus, palpis fusco-flavis, scutello flavo aut flavo-marginato, alis cinereis maculis nonnullis magnis limpidis parvisque fuscis, halteribus albis, abdomine obscure fusco, pedibus pallidis, genubus tibiisque apice nigro-punctatis; Mas*, antennarum plumis auratis; *Fœm.* antennis albidis apice fuscescentibus. Long. $\frac{2}{3}$–$\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Male and Fem. Yellowish-cinereous. Palpi brownish-yellow. Scutellum yellow, or with a yellow border. Wings grey, pubescent, limpid at the base, and adorned with some large limpid spots and with a few small brown spots. Halteres white. Abdomen dark brown, sometimes yellowish at the base and beneath in the living insect. Legs pale, with little black dots on the knees and on the tips of the tibiæ. Male. Plumes of the antennæ gilded-brown. *Fem.* Antennæ whitish, pale brown towards the tips, clothed with whitish hairs; joints from the first to the eighth oval, from the ninth to the thirteenth elongate-elliptical. Wings much darker than those of the male.

Not common. (E.)

34. **pulicaris,** Linn. F. S. 1892 (1767); F.; Gmel.; Meig.; Mcq.; Dahlb.; Stæg.; Zett.; Rs.; Winn.! Linn. Ent. vi. pl. 5. f. 34. —*punctata*, Latr.; Panz. *Mas et Fœm. cinereus, palpis fuscis, thorace vittis duabus lateralibus obscure fuscis, alis albis fusco-guttatis, halteribus albis, abdomine nigro-fusco, suturis sæpissime albidis, pedibus pallide fuscis, tibiis posticis basi albidis, tarsorum articulis apice obscuris; Mas*, antennarum plumis flavido-fuscis auratis; *Fœm.* antennis fuscescentibus. Long. $\frac{2}{3}$–1; alar. $1\frac{1}{2}$–2 lin.

Grey. Palpi brown; first joint slender. *Thorax with a dark brown stripe on each side in front of the wings. Pectus and scutellum brown. Wings white, with brown dots, of which three along the costa are larger and darker than the others. Halteres white. Abdomen blackish-brown; sutures of the segments generally whitish. Legs pale brown; hind tibiæ whitish at the base; tarsi paler, their joints with dark tips. Male.* Plumes of the antennæ yellowish-brown, gilded. *Fem.* Antennæ brownish; joints from the first to the eighth oval, from the ninth to the thirteenth elongate-elliptical.

Generally distributed. Very abundant and annoying in marshy places. (E. S. I.)

35. **albicans,** Winn.! Linn. Ent. vi. 41. 35. pl. 6. f. 35 (1852). *Mas et Fœm. cinereus, palpis flavis, thorace albo-piloso* setis nonnullis nigris, *alis albis,* venis pallidis, *halteribus albis, abdomine albo-hirto, pedibus pallide flavescentibus* cano-hirtis, *femoribus tibiisque apice nigris; Mas,* antennarum plumis fuscis auratis apice albidis, alis ex parte pubescentibus, *abdomine fusco; Fœm. antennis albidis, thorace flavo-cinereo,* alis totis pubescentibus, *abdomine albido.* Long. $\frac{1}{2}$–$\frac{2}{3}$; alar. 1–1$\frac{1}{3}$ lin.

Male and Fem. Grey, clothed with white hairs. *Palpi yellow. Wings white,* with some white hairs; veins pale. *Halteres white. Legs pale yellowish,* with grey white-glistening hairs; *femora and tibiæ with black tips. Male.* Plumes of the antennæ gilded-yellow, glistening-white at the tips. Wings partly pubescent. *Abdomen brown.* Thorax with a few black bristles. *Fem. Antennæ whitish;* joints from the first to the eighth oval, from the ninth to the thirteenth elongated-elliptical. *Thorax yellowish-grey,* without black bristles. Wings wholly pubescent. *Abdomen whitish.*

Not common. (E.)

36. **æstivus,** Winn.! Linn. Ent. vi. 42. 36. pl. 6. f. 36 (1852). *Fœm. nigro-cinereus, palpis antennisque nigris, his nitidis apice albidis, thorace obscuro dorso cinereo vittis quinque nigris, scutello fulvo, alis albicantibus,* venis pallidis apud costam fuscis, *halteribus fuscis, capitulis sordide albis, abdomine nigro-fusco obscuro, pedibus piceis, tarsis flavido-albis, articulis apice obscuris.* Long. $\frac{2}{3}$; alar. 1$\frac{1}{3}$ lin.

Fem. Blackish-grey. Palpi black. Antennæ shining black; joints from the first to the eighth oval, *from the ninth to the thirteenth* elliptical, *glistening-white. Thorax dull; dorsum glistening-grey, with five stripes, the middle one very slender, the outermost pair broadest. Scutellum tawny. Wings whitish;* veins pale, brown towards the costa. *Halteres brown, with dingy-white knobs. Abdomen blackish-brown, dull. Legs piceous; tarsi yellowish-white, their joints with dark tips.*

Not common. (E.)

37. **cunctans,** Winn.! Linn. Ent. vi. 42. 37. pl. 6. f. 37 (1852). *Fœm. murinus,* flavido-pilosus, *palpis antennisque fuscis,* his pilis verticillatis flavidis albo-nitentibus, *pectoris lateribus nigricantibus cano-nitentibus, alis hyalinis* cinereo-hirtis, venis pallidis apud costam fuscescentibus, *halteribus albis, abdomine nigro obscuro* cano-piloso, *pedibus pallide piceis, tarsis albidis basi piceis, articulis apice fuscis.* Long. $\frac{2}{3}$; alar. 1$\frac{1}{3}$ lin.

Fem. Mouse-colour, clothed with yellowish hairs. *Palpi and antennæ brown,* the latter with yellowish white-glistening verticillate hairs; joints from the first to the eighth oval, from the ninth to the thirteenth elongate-elliptical. *Sides of the pectus blackish, with a glistening hoary hue. Wings hyaline,* with grey hairs; veins pale, brownish towards the costa. *Halteres white. Abdomen black, dull,* with short hoary hairs. *Legs pale piceous; second, third, fourth, and fifth joints of the tarsi whitish, with brown tips.*

(E.?)

38. **modestus,** Winn.! Linn. Ent. vi. 43. 38. pl. 6. f. 38 (1852). *Fœm. niger, obscurus, palpis nigro-fuscis, antennis fuscis, scutello albo-flavo, alis hyalinis* cinereo-hirtis, *halteribus albidis, petiolis fuscis, abdomine nigro-fusco* albido-hirto, *pedibus pallide piceis, tarsis albidis.* Long. ½; alar. 1 lin.

Fem. Palpi blackish-brown. Antennæ brown; joints with blackish-verticillate hairs, more elongated successively from the first to the eighth, which last has almost the form of the five following long elliptical joints, whose hairs are tinged with glistening-white. *Thorax dull black,* appearing in some aspects glistening-grey, with broad black stripes. Pectus blackish-brown on each side. *Scutellum whitish-yellow. Wings hyaline,* appearing whitish when seen on a dark surface, with grey hairs; veins pale, brown towards the costa. *Halteres brown, with dingy-white knobs. Abdomen blackish-brown, dull,* with whitish hairs. *Femora pale piceous; tibiæ paler; tarsi whitish.*

(E.?)

39. **egens,** Winn.! Linn. Ent. vi. 43. 39. pl. 6. f. 37 (1852). *Fœm. niger aut cinereus, palpis antennisque nigris, thorace* setis nonnullis nigris *maculis quatuor lateralibus sordide flavis, scutello fulvo, alis albidis* canopilosis, venis pallidis apud costam fuscis, *halteribus nigro-fuscis apice canis, abdomine nigro-fusco obscuro* cinereo-hirto, *pedibus nigro-fuscis, tarsis albidis, apice fuscis.* Long. ½; alar. 1 lin.

Fem. Palpi black. Antennæ black; joints from the first to the eighth oval, with black verticillate hairs; from the ninth to the thirteenth somewhat elongated, with white hairs. *Thorax dull black, or blackish-grey, or glistening-hoary,* with some little black bristles; *a dingy dark yellow and somewhat prominent mark on each side of the pectus before the wings, and on each shoulder. Scutellum tawny. Wings whitish,* with hoary hairs; veins pale but distinct, brownish, and with blackish-brown tips towards the costa. *Halteres blackish-brown, their clubs with hoary tips. Abdomen blackish-brown, dull,* thinly clothed with greyish hairs. *Legs blackish-brown; tarsi whitish, with brown tips.*

(E.?)

40. **scutellatus,** Meig. Zw. vi. 262. 46 (1830); Winn.! Linn. Ent. vi. pl. 6. f. 40. *Mas et Fœm. niger, thorace atro nitido* setis nonnullis nigris *maculis quatuor lateralibus flavis, scutello flavido-albo, alis hyalinis* ex parte pubescentibus, venis pallidis apud costam fuscis, *halteribus fuscis, capitulis apice albis, abdomine obscuro* apice albido-hirto, *femoribus fuscescentibus, tibiis pallidioribus, tarsis albidis; Mas,* antennarum plumis apice albidis. Long. ½; alar. 1 lin.

Male and Fem. Black. Thorax deep black, shining, with a few black bristles; *a dingy yellow spot on each side of the pectus before the wings, and a yellow dot on each shoulder. Scutellum yellowish-white. Wings hyaline,* whitish when seen on a dark surface, partly pubescent; veins pale, distinct, brown towards the costa. *Halteres brown; their knobs with white tips. Abdomen dull,* with whitish hairs at the tip. *Femora*

brownish; tibiæ paler; tarsi whitish. Male. Plumes of the antennæ somewhat glistening-white at the tips. *Fem.* Antennæ with black verticillate hairs; basal joints almost cylindrical, the following successively more and more oval; the five last slightly elongated, elliptical.

Not rare. (E.)

41. **versicolor,** Winn.! Linn. Ent. vi. 45. 41. pl. 6. f. 41 (1852). *Fœm. cinereo-fuscus, palpis antennisque nigris, thorace vittis tribus obscurioribus,* pectoris lateribus albo-notatis, *scutello flavo disco fusco, alis hyalinis albidis* cinereo-pilosis, venis pallidis apud costam fuscis, *halteribus fuscescentibus, abdomine atro segmentis albo-marginatis, pedibus fulvis articulis apice fuscis, tibiis posticis fusco-cinctis.* Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Fem. Palpi and antennæ black, the latter with black hairs, which have glistening-white tips; joints oval; first and second cylindrical; thirteenth large, elliptical, ending in a short style. *Thorax greyish-brown, dull, with three darker stripes,* appearing, when seen in front, grey, with two slender brown stripes; when seen laterally, grey, with four brown stripes, and in some aspects wholly grey. Pectus brownish-grey, with four lateral glistening-white marks. *Scutellum brown, with a broad yellow border. Wings hyaline, somewhat whitish,* with grey hairs; veins pale, brown towards the costa. *Halteres brownish. Abdomen deep black, with slender white bands on the hind borders of the segments. Legs tawny; tips of the femora and of the tibiæ brown; tarsi brownish, excepting the first and second joints; hind tibiæ with a broad brown middle band.*

(E. ?)

42. **obscurus,** Winn.! Linn. Ent. vi. 45. 42. pl. 6. f. 42 (1852). *Fœm. nigro-fuscus, palpis antennisque nigris, thorace vittis tribus fuscis, alis hyalinis* cinereo-pilosis, venis pallidis apud costam fuscis, *halteribus nigris, abdominis incisuris albidis, pedibus atris, tarsis albidis, femoribus anticis apice fulvo-cinctis.* Long. $\frac{2}{3}$; alar. $1\frac{1}{3}$ lin.

Fem. Blackish-brown. Palpi and antennæ black, the latter with black hairs, which have glistening-white tips. *Thorax dull,* with a glistening-grey tinge, *three brown stripes apparent in some aspects. Scutellum brown. Wings hyaline, somewhat whitish,* with grey hairs; veins pale, brown towards the costa. *Halteres black. Abdomen with slender whitish incisures. Legs deep black; tarsi whitish; fore tibiæ with a slender tawny band near their tips.*

(E. ?)

43. **pumilus,** Winn.! Linn. Ent. vi. 46. 43. pl. 6. f. 43 (1852). *Fœm. nigro-cinereus, palpis flavis, antennis flavescentibus* pilis verticillatis albis, thorace setis nonnullis nigris, *alis hyalinis* cano-hirtis, venis pallidis costalibus apice fuscescentibus, *halteribus albis,* abdomine albido-piloso, *pedibus pallidis, genubus nigricantibus.* Long. $\frac{2}{5}$; alar. $\frac{4}{5}$ lin.

Fem. Blackish-grey. Palpi yellow. Antennæ yellowish, with white verticillate hairs; joints from the first to the eighth oval, from the

ninth to the thirteenth elongated-elliptical. Thorax with a few black bristles. *Wings hyaline*, whitish when seen on a dark surface, with hoary hairs; veins pale; costal veins with brownish tips. *Halteres white. Abdomen brown, pale beneath, flesh-colour in the living insect*, thickly covered with short whitish hairs. *Legs pale; knees blackish.*

Not common. (E.)

44. **neglectus,** Winn.! Linn. Ent. vi. 46. 44. pl. 6. f. 44. (1852). *Mas, obscure fuscus, palpis antennisque nigris*, harum plumis nigris apice albidis, thorace nigro-hirto, alis *hyalinis* nigro-pilosis, venis pallidis apud costam nigris, *halteribus nigro-fuscis, abdomine nigro-fusco, pedibus pallide piceis, tarsis albidis articulis apice fuscis.* Long. $\frac{2}{3}$; alar. $1\frac{1}{4}$ lin.

Male. Palpi black; first joint long; second short, almost cylindrical. *Antennæ black*, with black plumes, whose tips are glistening-white. *Thorax dark brown, dull*, with a whitish glistening in some aspects, clothed with black hairs. *Wings hyaline*, whitish when seen on a dark surface, with black hairs; veins pale, black towards the costa. *Halteres blackish-brown; their knobs with almost grey tips. Abdomen blackish-brown*, with black, hoary-glistening hairs. *Legs pale piceous; tarsi whitish, their joints with dark tips.*

Not common. (E.)

45. **splendidus,** Winn.! Linn. Ent. vi. 47. 45. pl. 6. f. 45 (1852). *Mas, albo-flavus, antennis auratis, pectore et scutello albis, alis pallide fusco-flavis guttis duabus anticis et sex posterioribus nigris marginibus apices versus pilosis, halteribus albis, abdomine atro segmentorum marginibus niveis, pedibus albidis cingulis nigris.* Long. $\frac{3}{5}$; alar. 1 lin.

Male. Proboscis and palpi yellowish-white. Antennæ and their plumes *gilded-yellow;* tips of the latter tinged with brown; *hind head hoary; vertex silvery-white. Thorax whitish-yellow, inclining to brown*, finely punctured with brown. *Pectus, scutellum and metathorax white. Wings pale brownish-yellow*, appearing white on a dark surface, pubescent along the apical half of the border, *with eight black dots,—two on the veins by the costa, two in the disc, and four in a row hindward from half the length of the border to the tips of the wing. Halteres white. Abdomen deep black, with slight snow-white bands on the hind borders of the segments;* the four last segments appearing wholly white in some aspects. *Legs whitish; tips of the femora, of the tibiæ, and of the joints of the tarsi with black bands; hind tarsi wholly black; fore tibiæ with a brown subapical band; hind tibiæ with two brown bands.*

(E.?)

46. **ochraceus,** Winn.! Linn. Ent. vi. 48. 46. pl. 6. f. 46 (1852). *Mas*, ochraceo-flavus, palpis apice fuscescentibus, antennis fuscis, alis limpidis nudis apices versus pubescentibus, venis distinctis plus minusve fuscescentibus apud costam apice incrassatis, pedibus pallidioribus. Long. $\frac{3}{4}$; alar. $1\frac{1}{3}$ lin.

Male. Ochraceous-yellow. Palpi with brownish tips. Antennæ brown; joints elliptical; ninth and the four following much elongated.

Wings limpid, bare, pubescent towards the tips; veins distinct, more or less brownish, those towards the costa with incrassated tips. Legs paler than the body; one of the ungues about twice the length of the other.

Not rare. (E.)

47. **vitiosus,** Winn.! Linn. Ent. vi. 49. 47. pl. 6. f. 47 (1852). *Mas et Fœm. obscure nigro-cinereus, palpis fuscis, antennis nigris, alis flavescentibus aut albidis,* venis fuscis, *halteribus albis, pedibus albidis, genubus posticis nigris; Mas,* antennarum plumis apice albidis. Long. $\frac{1}{3}$; alar. $\frac{2}{3}$ lin.

Male and Fem. Dull blackish-grey. Palpi brown. Antennæ black. Wings appearing yellowish in the light, whitish when seen on a dark surface; veins brown. *Halteres white.* Legs whitish; hind knees black. *Male.* Plumes of the antennæ black, glistening-whitish towards the tips. *Fem.* Joints of the antennæ from the first to the third cylindrical; from the fifth to the eighth more oval; from the ninth to the thirteenth elongated, elliptical.

(E.?)

48. **lacteipennis,** Zett. I. L. 820. 4 (1840); Winn.! Linn. Ent. vi. pl. 6. f. 48. *Mas et Fœm. niger, antennis nigro-fuscis, thorace vix nitido, alis lacteis,* venis albidis, *halterum capitulis lacteis, femoribus tibiisque piceis aut fuscescentibus apice obscurioribus, tarsis albidis articulis apice nigris; Mas,* antennarum plumis nigro-fuscis apice albidis. Long. $\frac{1}{2}$; alar. 1 lin.

Male and Fem. Black. Antennæ blackish-brown. Thorax hardly shining. Wings milk-white; veins whitish. *Halteres with milk-white knobs. Legs piceous, or brownish; tips of the femora and of the tibiæ darker; tarsi whitish, their joints with black tips; hind tarsi occasionally piceous. Male.* Plumes of the antennæ blackish-brown, with glistening-white tips. *Fem.* Joints of the antennæ from the first to the third cylindrical; from the fifth to the eighth more oval; from the ninth to the thirteenth elongated, elliptical.

Not common. (E.)

49. **nitidus,** Meq. H. N. D. i. 64. 2 (1834); Meig.; Stæg.; Zett.; Winn.! Linn. Ent. vi. pl. 7. f. 49. *Mas et Fœm.* niger, nitidus, facie, proboscide palpisque nigro-fuscis, thorace atro, alis limpidis sublanceolatis, venis pallidis apud costam fuscescentibus, halteribus nigris petiolis flavescentibus, pedibus fulvis nigro-variis; *Mas,* antennarum plumis apice albidis, unguibus parvis; *Fœm.* unguibus longissimis. Long. $1\frac{1}{4}$–$1\frac{2}{3}$; alar. $2\frac{1}{2}$–3 lin.

Male and Fem. Black, shining. Face, proboscis, and palpi blackish-brown. Thorax deep black. Wings limpid, almost lanceolate; veins pale, brownish towards the costa. Halteres with yellowish petioles. Abdomen with the first and second segments more or less semitransparent, tawny. Legs tawny, more or less varied with black; first and second joints of the tarsi whitish with black tips; third, fourth and fifth

black; third whitish at the base. *Male.* Plumes of the antennæ with glistening-white tips. Ungues short and slender. Plantæ with short slender spines. *Fem.* First and second joints of the palpi often yellow, or pale brown. Antennæ occasionally yellow towards the base; joints from the first to the eighth cylindrical, almost oval; from the ninth to the thirteenth much elongated, elliptical; first joint twice the length of the second. Abdomen more obscure, and much contracted at the base, where as well as at the tip and on the hind borders of the segments there are a few glistening-whitish hairs; underside with a large subapical tuft of longer black hairs. Ungues stout, long. Plantæ beset with five or six pairs of stout spines.

Generally distributed. (E. S. I.)

Stæger remarks that immediately after pairing the male is the prey of the female, which holds its partner with its strongly armed fore-legs, and inserts its proboscis deep into the peristoma, or the opening of the mouth.

50. **flavirostris,** Winn.! Linn. Ent. vi. 52. 50. pl. 7. f. 50 (1852). *Mas et Fœm. niger, nitidus, capite antice subtusque, pectorisque lateribus auticis flavis, alis limpidis,* venis pallidis, *halteribus niveis petiolis albidis, pedibus albo-flavis, femoribus et tibiis posticis tarsorum posticorum articulis apice nigris; Mas, palpis pallide-fuscescentibus, antennis nigris, abdominis apice flavo; Fœm. palpis nigro-fuscis, antennis albidis apices versus fuscescentibus.* Long. 1; alar. 2 lin.

Male and Fem. Black, shining. Head in front and beneath, proboscis, fore sides and fore border of the pectus, and a streak by the base of each wing, yellow. Wings limpid; veins pale. *Halteres whitish, with snow-white knobs. Legs whitish-yellow; tips of the hind femora, of the hind tibiæ, and of the joints of the hind tarsi, black.* Ungues slender, without teeth. *Male. Palpi pale brown, very large. Antennæ black,* with black plumes; tips of the latter glistening-white. Abdomen with yellow forceps. *Fem. Palpi blackish-brown. Antennæ whitish;* first joint cylindrical, twice the length of the second; the seven following joints more oval, somewhat contracted in the middle; the five last brownish, elongated, cylindrical. *Hind femora blackish-brown for some space from their tips.* (E.?)

51. **illustris,** Winn.! Linn. Ent. vi. 53. 51. pl. 7. f. 51 (1852). *Fœm. albo- aut flavido-cinereus,* capite postico nigro-fusco, *proboscide palpisque flavis aut pallide fuscis, antennis pallide flavis apicibus fuscis, thorace lineis punctisque purpureo-fuscis, scutello flavo vittis quatuor fuscis, pectore et metathorace nigro-fuscis, hoc subtus flavo-marginato, alis subfuscescentibus,* venis nigro-fuscis, *abdomine nigro-fusco-nitido, pedibus nigro-fuscis, tarsis flavis, femoribus tibiisque posticis incrassatis.* Long. $\frac{4}{5}$; alar. $1\frac{3}{5}$ lin.

Fem. Head with some glistening-white marks arranged in the form of a cross behind the crown; hind part blackish. *Proboscis and palpi yellow or pale brown;* joints of the latter very long; second, third, and

fourth of almost equal length. *Antennæ pale yellow*, slender; *their tips brown;* first joint oval; joints from the second to the eighth more cylindrical; from the ninth to the thirteenth elongated, elliptical. *Thorax white or yellowish-grey, with irregular stripes and many points, of a purplish-brown colour;* the hinder half appearing in some aspects purplish-brown, with three white-glistening stripes. *Scutellum yellow, with four brown stripes. Metathorax blackish-brown, with a yellow border beneath. Pectus blackish-brown, shining,* with a glistening-greyish hue. *Wings slightly brownish,* appearing whitish when seen on a dark surface, *with various dark brown spots, limpid at the base and at the tips, and with a limpid spot by the costa, at two-thirds of the length;* veins blackish-brown. Halteres white. *Abdomen blackish-brown, shining,* clothed with white-glistening down; *sutures silvery on each side. Legs blackish-brown; tarsi yellow, their joints with brown tips; fore legs piceous-brown, with pale yellow knees and yellowish-white tarsi.*

Rare. In the collections of Mr. Curtis and Mr. Dale. (E.)

52. **copiosus,** Winn.! Linn. Ent. vi. 56. 52. pl. 7. f. 52 (1852). *Mas et Fœm. niger, nitens,* thorace pilis nonnullis nigris, *alis limpidis,* venis pallide fuscescentibus, *halteribus albis fusco-petiolatis, pedibus nigro-piceis, tarsis albidis articulis apice obscurioribus, femoribus tibiisque posticis robustis; Mas,* antennarum plumis apice albo-nitentibus. Long. $\frac{1}{2}$–$\frac{3}{4}$; alar. $1\frac{1}{2}$–2 lin.

Black, shining. Thorax with a few black hairs. *Wings limpid;* veins pale brown. *Halteres brown, with white knobs. Abdomen bare. Legs piceous-black; tarsi whitish, their joints darker towards the tips; hind femora and hind tibiæ more than usually stout. Male.* Plumes of the antennæ glistening-white towards the tips.

Not rare. (E.)

53. **gracilis,** Hal. Ent. Mag. i. 152 (1833).—*dorsalis,* Zett. D. Sc. 3644. 19. "*Niger, nitidus, scutello flavo, pleuris pedibusque luteis, posticis obscurioribus, alis obscure hyalinis, halteribus albidis.*" Long. $1\frac{1}{4}$; alar. $2\frac{3}{4}$ lin.

Head dingy yellow; occiput and vertex fuscous, shining. Eyes black in the dried insect. Palpi slender, fuscous, nearly filiform. Thorax above glossy black or piceous. Scutellum yellow. Pleuræ and pectus tawny yellow. Wings smoky hyaline; veins rather darker; the tip of the wing a little pubescent, as well as the veins; second cubital areolet nearly twice as long as the first; subapical fork petiolated. Halteres creamy-white, yellowish at the base. Abdomen above piceous, beneath yellowish, except the tip; the base sometimes rather pellucid yellowish. Legs light yellowish, dusky at the joints; hind femora (except the base), hind tibiæ, and posterior coxæ, darker; hind tibiæ ciliated outside. Ungues black. *Male.* Antennæ with the first joint dusky yellow; the pencil at first with a yellowish gloss, but blackish-brown outwardly. Abdomen rather incrassated at the tip. Ungues small, equal. *Fem.* Antennæ blackish-brown, longer by half than the

thorax; the first (large oblate sphæroidal) joint and the base of the second dingy yellowish. Vagina dingy yellowish. Ungues unequal, the longer nearly as long as the claw-joint.

Found at Holywood. Not very rare in open groves. (I.)

Obs. C. gracilis, Winn., has no relation to this species.

54. **candidatus,** Winn.! Linn. Ent. vi. 57. 53. pl. 7. f. 53 (1852). *Fœm.* ater, obscurus, palpis antennisque nigris, his nigro-hirtis, alis niveis, venis pallide fuscescentibus, halteribus niveis, pedibus nigro-fuscis, tarsorum articulis primo et secundo albis. Long. 1; alar. 2 lin.

Fem. Deep black, not shining. Palpi black. Antennæ black, with black verticillate hairs, which are glistening-white on the apical joints; joints from the first to the eighth cylindrical; from the ninth to the thirteenth elongated, oval. Wings and halteres snowy-white; veins pale brownish. Legs blackish-brown; first and second joints of the tarsi white.

(E.?)

55. **flavipes,** Meig. Zw. i. 82. 35 (1818); Stæg.; Winn.! Linn. Ent. vi. pl. 7. f. 54.—*hortulanus,* Meig.; Zett.; Rs. *Fœm.* niger, nitidus, *capite postico, facie, palpis, antennisque nigro-fuscis,* alis limpidis, venis apud costam pallide fuscis, *halteribus albidis, capitulis nigris,* pedibus fulvis nigro-variis. Long. $1\frac{1}{2}$–$1\frac{2}{3}$; alar. 3 lin.

Fem. Black, shining. *Hind head, face, palpi, and antennæ blackish-brown.* First joint of the antennæ cylindrical, contracted before and beyond the middle; the following seven joints more oval, contracted only in the middle; the five last cylindrical, much elongated, somewhat widened at the base of each. Wings limpid; veins pale brown towards the costa. *Halteres whitish, with black knobs. Fore legs tawny;* femora with eight spines; *knees, tips of the tibiæ, and tarsi, black; first tarsal joint tawny, with a black tip; second more or less tawny towards the base. Middle legs tawny; tarsi, apical third part of the femora, and tips of the tibiæ, black; first tarsal joint tawny, with a black tip. Hind legs black; femora tawny for two-thirds of the length from the base.* Ungues short.

Generally distributed. (E. S. I.)

56. **spinipes,** Meig. Zw. i. 81. 33 (1818); Winn.! Linn. Ent. vi. pl. 7. f. 55. *Mas,* niger, nitidus, *capite nigro-fusco,* alis limpidis, venis apud costam fuscis, *halteribus albis, abdomine fusco apud apicem nigro, pedibus fulvis, genubus, tibiis apice tarsisque nigris, tarsorum articulis quarto et quinto fuscis, femoribus posticis apices versus nigris.* Long. 1; alar. 2 lin.

Male. Head blackish-brown. Antennæ and their plumes rather paler; the long apical joints with white-glistening verticillate hairs. Thorax black, shining. Wings limpid; veins towards the costa brown. *Halteres white.* *Abdomen brown, black towards the tip;* forceps very small, with pointed blades. *Legs tawny; knees, tarsi, and tips of the tibiæ, black; fourth and fifth tarsal joints brown; apical third part of the hind femora black;* fore femora armed with seven spines; middle fe-

mora with one spine; hind femora with three spines; ungues short and slender.

Not rare. (E.)

57. **brachialis,** Hal. Ent. Mag. i. 152 (1833). *Mas,* "niger, nitidus, antennis puberulis flavidis, alis nudis fusco-hyalinis, halteribus apice nigris, abdomine basi flavido, pedibus luteis, femoribus apice nigris anticis subtus spinulosis. Long. $1\frac{1}{3}$; alar. $2\frac{1}{2}$ lin.

"*Male.* Shining black. Face piceous. Proboscis short and stout. Palpi nearly filiform, dusky yellowish. Antennæ dusky yellowish; the intermediate joints simply pubescent, but the short joints not so strongly separated as in the other species of this genus, forming a nearly linear flagellum. Thorax very large and convex. *Wings smoky hyaline,* naked, with pale brown veins; second cubital areolet nearly three times as long as the first. Halteres yellowish, with black tips. *Abdomen pitchy, more or less yellowish-pellucid at the base; beneath yellowish, with the tip pitchy.* Hypopygium small. *Legs tawny-yellow; posterior coxæ rather dusky; femora black at the tip; tarsi dusky at the tip; hind tibiæ darker, nearly black at the tip; hind tarsi rather darker;* ungues small, equal (as usual in the male); fore femora stout, armed beneath with black spines (six to ten); hind tibiæ sparingly and slightly ciliated.

"Rare. Found at Holywood, generally at the skirts of young larch plantations. (I.)

"*Obs. C. armipes,* Meig. (Zw. vii. 20, 70), resembles this species in many respects, but the *halteres are white.*"—*Hal. MSS.*

58. **distinctus,** Hal. Ent. Mag. i. 152 (1833). *Fœm.* "niger, nitidus, scutello flavo, pleuris pedibusque luteis, posticis obscurioribus, alis nudis hyalinis, halteribus albidis, femoribus apice nigris anticis subtus spinulosis. Long. $1\frac{1}{2}$; alar. 3 lin.

"*Fem.* Face dusky yellow. Proboscis stout. Palpi nearly filiform, dusky. Antennæ dusky yellow; first joint large, pitchy black. Thorax above pitchy black. Scutellum yellow. Pleuræ tawny-yellow; a band descending under the wings, and the middle of the mesosternum dusky. Wings nearly hyaline; veins light brownish-yellow; second cubital areolet narrow, more than twice as long as the first; veining nearly as in *C. flavipes,* but the first cubital areolet rather longer. Halteres creamy-white, yellowish at the base. Legs tawny-yellow; fore femora with the tip only, middle pair to one-fourth, hind pair to one-half, black; fore tibiæ with a blackish dot at the tip; tarsi dusky at the tip (the last three joints); ungues small, equal, with a small tooth at the base (as in *C. ferrugineus*); fore femora stout, armed with black spines beneath (ten, or fewer)."—*Hal. MSS.*

Very rare. Found at Holywood. (I.)

59. **variegatus,** Winn.! Linn. Ent. vi. 59. 57. pl. 7. f. 57 (1852). *Mas et Fœm.* niger, nitidus, facie, proboscide palpisque fusco-flavis, pectore fulvo aut nigro-fusco maculis duabus lateralibus argenteis, alis

hyalinis subfuscescentibus macula media costali fusca, venis fuscis apud costam nigro-fuscis, halteribus albis, abdomine nigro-fusco, pedibus fulvis nigro-variis. Long. 1–1¼; alar. 2–2½ lin.

Male and Fem. Black, shining, almost bare. Face, proboscis, and palpi brownish-yellow, or blackish-brown; second and fourth joints of the palpi elongated. Thorax and border of the scutellum with a few black bristles. Pectus tawny, blackish-brown on each side, or wholly blackish-brown, with a silvery white spot on each side. Wings hyaline, slightly brownish, with a brown spot on the middle of the costa; veins stout, brown, almost blackish-brown towards the costa. Halteres white. Abdomen blackish-brown. Legs tawny. Fore legs with the knees, the tips of the tibiæ, and the tips of the first and second tarsal joints, black; third and fourth tarsal joints blackish-brown; fifth black, with a snow-white band. Posterior legs, with the femora towards the tips, the tips of the tibiæ, and the tips of the three first tarsal joints, black; fourth and fifth joints blackish-brown. Hind tibiæ black for one-third or one-half the length from the base. Fourth tarsal joint with a long spine on each side. *Male.* Ungues long, stout, of equal length. Anterior femora with one spine; hind femora with two spines. *Fem.* Darker than the male. Antennæ almost two-thirds of the length of the body; joints from the first to the eighth cylindrical, somewhat contracted in the middle; from the ninth to the thirteenth much elongated, cylindrical, with the base somewhat thickened; first joint twice the length of the second. Posterior ungues of unequal length. Anterior femora with two spines; hind femora with three spines.

(E.?)

60. **ferrugineus,** Meig. Zw. vi. 265. 58 (1818); Stæg.; Zett.; Winn.! Linn. Ent. vi. pl. 7. f. 58. *Fœm. fulvus,* antennis apices versus fuscis, metathorax maculis duabus fuscis, alis limpidis, venis apud costam flavescentibus, halteribus niveis, abdomine pallido, pedibus pallide fulvis nigro-fasciatis, femoribus spinosis. Long. 1⅔; alar. 3⅓ lin.

Fem. Tawny. Antennæ somewhat paler; joints from the first to the eighth elongate, oval, almost cylindrical, somewhat straightened in the middle, with brown tips; from the ninth to the thirteenth brown, much elongated, cylindrical, thick at the base. Metathorax with a brown spot, which is intersected by a slender fawny stripe. Wings limpid; veins towards the costa yellowish. Halteres snowy-white. Abdomen in the living insect white, with a yellowish tinge, more or less brownish after death; fourth and fifth segments generally with a brown spot on each side. Legs pale tawny; tips of the first, second, and third joints, and the whole of the fourth and fifth joints of the tarsi, black, as are also the tips of the tibiæ; fore femora slightly incrassated, armed with three spines; fore knees and apical third part of the posterior femora black, the latter with four spines.

Not rare. (E.)

61. **serripes,** Meig. Zw. i. 82. 34 (1818); Winn.! Linn. Ent. vi.

pl. 7. f. 59. *Fœm. niger, nitidus*, palpis antennisque nigro-fuscis, alis hyalinis subfuscescentibus, venis fuscis, halteribus nigro-fuscis, petiolis sordide albis aut fusco-flavis, femoribus spinosis anticis tarsisque fulvis, his apice nigris. Long. 1; alar. 2 lin.

Fem. Black, shining. Palpi and antennæ blackish-brown. Joints of the antennæ from the first to the eighth elongate-oval, the first much lengthened before the middle, the following straightened beyond the middle; the ninth and four following long, elliptical. Wings hyaline, slightly brownish; veins brown. Halteres blackish-brown, their petioles dingy-white, or brownish-yellow. Tarsi tawny; fourth and fifth joints black; anterior femora armed with four spines; fore femora tawny, occasionally with a black streak, slightly incrassated; middle femora occasionally tawny towards the base; hind femora with three spines; anterior tibiæ occasionally brownish.

Not rare. (E.)

62. **rufipectus,** Lincke, MSS.; Winn.! Linn. Ent. vi. 62. 60. pl. 7. f. 60 (1852). *Fœm. niger, nitidus*, capite et antennarum nodis fulvis, palpis fuscescentibus, antennis nigro-fuscis fulvo-cinctis, *humeris, pectore et coxis fulvis*, alis fuscescentibus apud costam obscurioribus subflavescentibus, venis fuscis, halteribus albo-flavis, abdomine nigro-fusco, segmenti primi margine postico flavo, pedibus fulvis nigro-fusco variis. Long. $1\frac{3}{4}$; alar. $3\frac{1}{2}$ lin.

Fem. Black, shining. Head and beads of the antennæ tawny. Palpi brownish; second joint large. Antennæ blackish-brown; joints cylindrical; first joint tawny, much elongated along the basal half, contracted before the middle; second and six following somewhat contracted beyond the middle; ninth and four following very long, thick at the base. *Humeri, pectus, and coxæ tawny.* In front of the wings on each side a large rounded brown spot, which emits a brown streak. Wings brownish, darker and with a yellowish tinge towards the costa; veins brown. Halteres whitish-yellow. Abdomen blackish-brown; a slender yellow band on the hind border of each segment. Legs tawny; tips of the femora and of the tibiæ blackish-brown; fourth and fifth joints of the tarsi black; hind tibiæ brown, blackish-brown at each end; fore femora incrassated, armed with spines along the whole length beneath; hind femora slightly incrassated, with one spine near the tip; plantæ with a stout bristle on the border.

Rare. (E.)

63. **lineatus,** Meig. Zw. i. 80. 30 (1818); Mcq.; Stæg.; Zett.; Winn.! Linn. Ent. vi. pl. 7. f. 61. *Mas et Fœm. pallide cinereus*, palpis obscure fuscis basi nonnunquam flavescentibus, thorace vittis maculisque duabus fuscis, metathorace abdomineque nigro-fuscis, hujus incisuris albidis, alis limpidis, venis pallide fuscis, halteribus nigro-fuscis, petiolis pedibusque fulvis, his plus minusve nigro-fusco variis. Long. $1-1\frac{2}{3}$; alar. 2–3 lin.

Male. Head grey. Palpi dark brown; first and second joints occa-

sionally yellowish; second joint long. *Thorax pale grey, with two stripes and two spots of a coffee-brown colour;* the spots are behind the stripes, which are occasionally interrupted. Scutellum sometimes more or less tawny. *Metathorax and abdomen blackish-brown, the latter with whitish sutures.* Wings limpid; veins pale brown. Halteres tawny, with blackish-brown knobs. Legs tawny, more or less blackish-brown at the tips of the femora, of the tibiæ, and of the joints of the tarsi; these bands as usual are broader on the femora than on the tibiæ, and on the hind legs than on the fore legs; fore femora armed with seventeen spines; middle femora with four; hind femora with three; hind plantæ with a stout bristle on the side. *Male.* Antennæ blackish-brown, their plumes with a yellowish glistening. *Fem.* Antennæ brown, generally with yellow bands, yellowish at the base; joints from the first to the eighth oval, almost cylindrical; from the ninth to the thirteenth elliptical, very long; first joint elongated before the middle; second and six following elongated beyond the middle. Wings slightly yellowish towards the costa.

Generally distributed. (E.)

64. **tibialis,** Meig. Zw. i. 82. 36 (1818); Stæg.; Rs.; Zett.; Winn.! Linn. Ent. vi. pl. 8. f. 62.—*apicalis?* Roser. *Fœm. niger, nitidus,* facie, palpis antennisque nigro-fuscis, alis subfuscescentibus apud costam obscurioribus, venis fuscis apud costam nigro-fuscis, abdomine basi subcontracto, pedibus fulvis, femoribus tibiisque apice fuscis, tarsis albo-flavis apice nigris, tibiis posticis nigris. Long. $1\frac{1}{2}$; alar. 3 lin.

Fem. Black, shining. Face, palpi, and antennæ blackish-brown; joints of the latter from the first to the eighth oval, almost cylindrical, somewhat straightened beyond the middle; from the ninth to the thirteenth elliptical, much elongated. Wings somewhat brownish, darker towards the costa; veins brown, blackish-brown in front. Halteres black; petioles occasionally yellowish-white. Legs tawny; tarsi whitish-yellow; fourth and fifth joints with black tips, wholly black in the hind tarsi; anterior knees and tips of the anterior tibiæ brown; hind femora for one-third of the length from the tips, and the whole of the hind tibiæ, black; fore femora and hind femora somewhat incrassated; fore femora with ten spines, middle femora with two, and hind femora with four; plantæ with five pair of spines; ungues stout.

Generally distributed. (E. S. I.)

65. **fasciatus,** Meig. Zw. i. 79. 27 (1818); Meq.; Stæg.; Blanch.; Zett.; Winn.! Linn. Ent. vi. pl. 8. f. 63.—*cingulatus,* Meig.; Rs.—*marginatus,* Steph.; Curt.! B. E. 285. *Fœm. pallide cinereus,* palpis fulvis aut nigro-fuscis, antennis nigro-fuscis, articulis inferioribus basi sæpissime fulvis, *thorace vittis tribus fuscis,* scutello sæpe plus minusve fulvo, metathorace nigro-fusco, alis hyalinis, venis pallidis apud costam fuscis, halteribus albis, abdominis basi apiceque nigro-fuscis, pedibus fulvis plus minusve nigro-fusco variis. Long. $2\frac{1}{2}$; alar. 5 lin.

Fem. Front and face grey, blackish-grey, or brown. Palpi tawny

or blackish-brown, occasionally partly tawny, partly blackish-brown. Antennæ blackish-brown; joints from the first to the fifth or sixth generally tawny at the base; first joint large, cylindrical, almost oval, contracted before the middle; second and six following joints elongate-oval, somewhat straitened beyond the middle; ninth and four following elongated, elliptical. *Thorax bluish-ash grey, mouse-grey, or whitish-grey, with three coffee-brown stripes.* Scutellum grey, sometimes more or less tawny. Pectus grey or blackish-grey, glistening-hoary. Metathorax blackish-brown. Wings limpid, whitish in some aspects; veins pale, brown towards the costa. Halteres white. *Abdomen whitish-grey or yellowish-white*, first segment wholly, and the following at the base, blackish-brown; last segment blackish-brown, with a white hind border. Legs tawny; femora and tibiæ more or less blackish-brown towards the tips; joints of the tarsi with black tips; plantæ with five or six pair of spines; fore femora and hind femora somewhat incrassated; fore femora with twenty-one to thirty spines; middle femora with seven to twelve spines; hind femora with eight to sixteen spines.

Not common. (E.)

66. **femoratus,** F. S. A. 45. 35 (1805); Latr.; Meig.; Stæg.; Meq.; Rs.; Zett.; Winn.! Linn. Ent. vi. pl. 8. f. 64.—*morio*, F.; Gmel.; Meig.; Meq.; Stæg.; Zett.—*ater*, Meig.; Rs.—*rufitarsis*, Meig. —*armatus*, Meig. *Mas et Fœm.* niger, nitens, alis limpidis aut fuscescentibus, venis albidis aut nigro-fuscis, halteribus albis, pedibus plus minusve fulvo variis, femoribus tibiisque posticis longiusculis, illis incrassatis et spinosis, tarsis albidis aut fulvis articulis apice obscurioribus; *Mas*, antennarum pluma apice albo-nitente. Long. 1–1½; alar. 2–2½ lin.

Male and Fem. Black, shining. Wings limpid-white, occasionally more or less brownish; veins whitish or brown. Halteres white. Legs often more or less tawny; tarsi whitish or tawny; the joints darker towards their tips; hind femora and hind tibiæ rather long, the former incrassated, thickly spinose beneath, slightly spinose above. *Male.* Plumes of the antennæ glistening-white towards their tips. Claws slender, of equal length on all the tarsi. *Fem.* Claws of the anterior tarsi of equal length. Hind tarsi with one claw four times the length of the other.

Winnertz describes twelve varieties of this species. Generally distributed. (E. S. I.)

67. **inflatus,** Winn.! Linn. Ent. vi. 71. 65. pl. 8. f. 65 (1852). *Mas, ater, nitidus*, fronte nigro-obscuro, facie palpisque nigro-fuscis, antennarum plumis apice albidis, alis albidis, venis pallidis apud costam fuscescentibus, halteribus albis, *abdominis segmentis primo, secundo tertioque apiceque albis*, pedibus albis, femoribus, tibiis tarsisque apice nigris. Long. ⅚; alar. 1⅔ lin.

Male. Front dull black. Face and palpi blackish-brown. Antennæ and their plumes blackish-brown, the latter with glistening-white tips.

Thorax deep black, shining. Wings somewhat whitish; veins pale, brownish towards the costa. Halteres white. *Abdomen black, slightly shining; first, second, and third segments and tip white.* Legs white; tips of the femora, of the tibiæ, and of the tarsi, black.
(E.?)

68. **valvatus,** Winn.! Linn. Ent. vi. 72. 66. pl. 8. f. 66 (1852). *Mas, ater, nitidus, capite contracto semigloboso,* alis limpidis, venis fuscis apud costam validis, forcipibus robustis, tarsorum articulis primo, secundo et tertio albis apice nigris. Long. 1; alar. 2 lin.

Male. Deep black, shining. Head almost semiglobose, more contracted than in any other species. Wings limpid; veins brown, stout towards the costa. Forceps robust; the blades pointed, broad at the base. First, second, and third joints of the tarsi white, with black tips.
(E.?)

69. **gracilipes,** Winn.! Linn. Ent. vi. 72. 67. pl. 8. f. 67 (1852). *Mas, niger,* antennis nigro-fuscis, plumis apice albidis, *thorace nitido pube tenui flavida vestito,* alis venisque albidis, halteribus nigris, tarsis albis articulis apice nigris, femoribus anterioribus castaneo-fuscis apice flavo-cinctis, tibiis anterioribus nigro-fuscis, femoribus tibiisque posticis nigris. Long. $1\frac{1}{4}$; alar. $2\frac{1}{2}$ lin.

Male. Black. Antennæ and their plumes blackish-brown, the latter with glistening-white tips. *Thorax so thinly covered with short yellowish down as not to diminish its shining.* Wings whitish; veins whitish. Halteres black. Tarsi white; their joints with black tips. Anterior femora chestnut-brown, with a slender yellow band at their tips; anterior tibiæ blackish-brown. Hind femora and hind tibiæ black.
(E.?)

70. **rubiginosus,** Winn.! Linn. Ent. vi. 72. 68. pl. 8. f. 68 (1852). *Fœm. castaneo-fuscus,* facie, pectore et coxis nigricantibus, antennis obscure fuscis basi flavido-fuscis, alis subfuscescentibus, venis obscuris apud costam adhuc obscurioribus, halteribus albis, capitulis apice nigris, *abdomine nigro-fusco nitido, ventre flavo apice nigro-fusco,* pedibus fusco-flavis, femoribus tibiisque apice nigris, tibiis posticis fere totis nigro-fuscis. Long. $1\frac{1}{4}$; alar. $2\frac{1}{2}$ lin.

Fem. Chestnut-brown. Face, pectus, and coxæ blackish. Antennæ dark brown, yellowish-brown at the base; first joint longer by half than the second, almost cylindrical; second and six following joints oval; ninth and fourth following long, elliptical. Thorax with an almost reddish glistening. Wings brownish; veins, especially those towards the costa, darker than the wings. Halteres white; tips of the knobs black. *Abdomen blackish-brown, shining; underside, excepting the two apical segments, yellow.* Legs brownish-yellow; tips of the femora and of the tibiæ black; hind tibiæ almost wholly blackish-brown.
(E.?)

71. **bicolor,** Panz. Fn. Germ. ciii. 13; Meig. Zw. i. 77. 22 (1818);

Zett.?; Winn.! Linn. Ent. vi. pl. 8. f. 69. *Fœm.* canus, antennis albis basi fuscis apices versus nigricantibus, thorace vittis tribus scutelloque fuscis, alis albidis, venis halteribusque albis, abdomine carneo, pedibus albis nigro-fasciatis. Long. 1; alar. 2 lin.

Fem. Hoary. Palpi white. Antennæ white, brown at the base; joints from the first to the eighth oval; from the ninth to the thirteenth elliptical, blackish. Thorax with three coffee-brown stripes. Scutellum brown. Wings whitish; veins and halteres white. Abdomen flesh-colour, white in the dead insect. Legs white; joints of the tarsi with black tips; fore femora with two black bands and with black tips; fore tibiæ with one black band and with black tips; middle femora black at the base and at the tips; middle and hind tibiæ black at the tips; hind femora black for half the length from the base, and with black tips.

(E.?)

72. **venustus,** Meig. Zw. i. 78. 24 (1818); Meq.; Stæg.; Zett.; Winn.! Linn. Ent. vi. pl. 8. f. 70.—*concinnus,* Meig.; Zett. *Fœm.* niger, nitidus, palpis antennisque flavo-albis, his apices versus fuscis, alis parvis limpidis, venis apud costam fuscis, halteribus albis, abdomine flavido-albo, pedibus flavis, femoribus tibiis tarsisque apice nigris, tibiis posticis nigro-cinctis. Long. $1\frac{1}{4}$; alar. $2\frac{1}{2}$ lin.

Fem. Black, shining. Palpi and antennæ yellowish-white; ninth and four following joints of the latter brown. Wings small, limpid, appearing whitish when seen on a dark surface; veins towards the costa brown. Halteres white. Abdomen yellowish-white. Legs yellow; femora, tibiæ, and tarsi with black tips; hind tibiæ with a more or less broad black band; fifth tarsal joint elongated, its onychia bristly.

Rare. (E.)

73. **signatus,** Meig. Zw. i. 74. 16 (1818); Stæg.; Zett.; Winn.! Linn. Ent. vi. pl. 8. f. 71. *Mas et Fœm. ater,* palpis albidis, *thorace vittis tribus maculisque duabus lateralibus argenteis,* alis albidis, venis pallidis apud costam subfuscescentibus, *halteribus nigro-fuscis petiolis basi albidis,* abdomine nigro-fusco albido-pubescente, pedibus nigro-fuscis, femoribus anterioribus flavo-albo unifasciatis, tibiis flavo-albo bifasciatis, tarsis albis articulis apice nigris; *Mas,* antennis nigris plumis aurato-fuscis; *Fœm.* antennis albo-fasciatis apices versus totis fuscis. Long. $\frac{3}{4}$; alar. $1\frac{1}{2}$ lin.

Male and Fem. Palpi whitish. *Thorax deep black, dull, with three silvery white stripes, and on each side with a silvery-white streak;* pectus with two silvery-white spots on each side. Wings whitish; veins pale, brownish towards the costa. *Halteres blackish-brown, whitish at the base.* Abdomen blackish-brown, with short whitish down. Legs blackish-brown; anterior femora with a yellowish-white band near each tip; tibiæ with a yellowish-white band at the base and another at the tip; tarsi white, their joints with black tips; fore femora with a subapical

spine. *Male.* Antennæ black, their plumes brown, gilded. *Fem.* Joints of the antennæ from the first to the eighth oval, with white bands; from the ninth to the thirteenth brown, elliptical.

Rare. (E.)

74. **gracilis,** Winn. Linn. Ent. vi. 76. 72 (1852). *Mas et Fœm. niger, nitidus,* palpis albidis, alis albidis, venis pallidis apud costam subfuscescentibus, halteribus nigro-fuscis, petiolis basi albidis, pedibus anterioribus albis nigro-fusco-fasciatis, femoribus tibiisque posticis nigro-fuscis; *Mas,* antennis nigris plumis aurato-fuscis; *Fœm.* antennis albo-fasciatis apices versus totis fuscis. Long. 1–1¼; alar. 2–2½ lin.

Male and Fem. Black, shining. Palpi whitish. Wings whitish; veins pale, brownish towards the costa. Halteres blackish-brown, whitish at the base. Anterior legs white; apical band of the femora, knees, middle band and tips of the tibiæ, and tips of the joints of the tarsi, blackish-brown; fore femora with a subapical spine. Hind legs blackish-brown, shining; femora and tibiæ yellowish at the base; tarsi white, their joints with black tips. *Male.* Antennæ black, their plumes brown, gilded. *Fem.* Joints of the antennæ from the first to the eighth oval, with white bands; from the ninth to the thirteenth brown, elliptical.

(E.?)

75. **ornatus,** Meig. Zw. vi. 262. 47 (1830); Winn. *Mas et Fœm. ater,* capite postico albicante, palpis fusco-flavis, *thorace subnitido cinerascente vittis tribus maculisque duabus lateralibus argenteis,* alis albidis, venis pallidis apud costam subfuscescentibus, *halteribus albis apice nigris,* abdomine nigro-fusco aut nigro vix nitido, pedibus flavis fasciis nigro-fuscis, tarsis albis articulis apice nigro-fuscis; *Mas,* antennis fuscis, plumis aurato-fuscis; *Fœm.* antennis fuscis flavo-cinctis. Long. 1; alar. 2 lin.

Male and Fem. Hind part of the head glistening-whitish; two black marks behind the vertex. Palpi brownish-yellow. *Thorax deep black, slightly shining, with a dark greyish glistening, adorned with three stripes, and on each side with two spots of a silvery hue.* Wings whitish; veins pale, brownish towards the costa. *Halteres white; the knobs, or the tips of the knobs, black.* Abdomen blackish-brown or black, hardly shining, except at the tip. Legs yellow; femora and tibiæ with black bands, which are very broad on the hind legs; tarsi white, their joints with blackish-brown tips; fore femora with a spine beneath towards the tips. *Male.* Antennæ brown, their plumes gilded-brown. *Fem.* Joints of the antennæ from the first to the eighth oval, yellow towards the base, brown towards the tips; from the ninth to the thirteenth elliptical, brown.

Not common. (E.)

76. **albipes,** Winn.! Linn. Ent. vi. 77. 74. pl. 8. f. 72 (1852). *Mas, ater, nitidus,* antennarum plumis apice albidis, alis albis, venis pallidis apud costam pallide fuscescentibus, halteribus nigris, *tarsorum*

articulis primo secundo tertioque albis apice nigris. Long. $\frac{5}{6}$; alar. $1\frac{2}{3}$ lin.

Male. Deep black, shining. Antennæ and their plumes black, the latter glistening-white at the tips. Wings white; veins pale, pale brown towards the costa. Halteres black. *First, second, and third joints of the tarsi white, with black tips.* Fore femora with three spines beneath towards the tips.

(E. ?)

77. **solstitialis,** Winn.! Linn. Ent. vi. 78. 75. pl. 8. f. 73 (1852). —*circumdatus?* Stæg.; Zett. *Mas et Fœm. cinereus*, palpis antennisque fuscis, *thorace vittis quatuor fuscis*, alis hyalinis subfuscescentibus, venis pallide fuscis apud costam obscurioribus, halteribus fuscis, petiolis sordide albis, tarsis albis articulis apice fuscis; *Mas, abdomine fusco*, pedibus flavescentibus fusco-cinctis; *Fœm. abdomine nigro-fusco incisuris albidis*, pedibus albo-flavis fusco-cinctis. Long. $1-1\frac{1}{4}$; alar. $2-2\frac{1}{2}$ lin.

Male and Fem. Palpi and antennæ brown. *Thorax grey, with four brown stripes.* Wings hyaline, brownish; veins pale brown, darker towards the costa. Halteres dingy white, with brown knobs. Fore femora with four spines beneath towards the tips; tarsi white, their joints with brown tips. *Male.* Head black; vertex with a glistening-white dot. Plumes of the antennæ very thick, brown, tinged with glistening-yellow. *Abdomen brown.* Legs yellowish; tips of the femora and of the tibiæ brown; femora with a brown band near the tips; tibiæ with a brown band before the middle. *Fem.* Head brown, with white hairs above. Joints of the antennæ from the first to the eighth oval, their clubs often yellow; from the ninth to the thirteenth elongated, elliptical. Thorax with a glistening-hoary tinge. Wings darker than those of the male. *Abdomen blackish-brown, with whitish sutures*, somewhat straitened at the base and at the tip. Legs whitish-yellow; femora and tibiæ with black tips, the former with a brown band near the tips, the latter with a brown band near the base. Var. *Male.* Hind femora and hind tibiæ brown for one-third of the length from the tips. Var. *Fem.* Hind femora blackish-brown for one-third of the length from the tips. Hind tibiæ blackish-brown for half the length from the base.

(E. ?)

78. **nobilis,** Winn.! Linn. Ent. vi. 79. 76. pl. 8. f. 74 (1852). *Fœm. fulvus*, palpis flavis, antennis apices versus fuscis, thoracis disco argenteo-cinereo vittis duabus fuscis, alis, venis halteribusque albis, pedibus albo-flavis nigro-cinctis, posticis nigris albo-flavo-cinctis. Long. $1\frac{1}{2}$; alar. 3 lin.

Fem. Tawny. Palpi yellow. Joints of the antennæ oval, with brownish-yellow clubs; from the ninth to the thirteenth long, elliptical, brown; first joint longer by half than the second, contracted before the middle. Disc of the thorax grey, with a silvery tinge on a tawny ground, and with two coffee-brown stripes. Wings, veins, and halteres white. Legs whitish-yellow; fore femora blackish-brown at the tips, near which there

is a blackish-brown band; fore tibiæ blackish-brown at the base and at the tips, and with a blackish-brown band near the base; middle femora and middle tibiæ with black tips, the latter black also at the base; hind femora and hind tibiæ black, each with a whitish-yellow middle band; fore femora with three spines; middle femora with one spine.

(E.?)

79. **tæniatus,** n. Hal. MSS. *Fœm.* "cinereus, opacus, thorace fusco-quadrilineato, alis nudis obscure hyalinis, areola cubitali unica, halteribus albidis, abdomine albido vittis tribus piceis intermedia interrupta, pedibus anterioribus ferrugineis fusco-annulatis, posticis nigris ferrugineo-annulatis, femoribus anticis subtus bispinosis. Long. $1\frac{3}{4}$; alar. 3 lin.

"*Fem.* Head dusky-cinereous. Orbit behind the eyes ciliated with black. Eyes coppery or brassy (in life). Palpi and antennæ blackish-brown. Antennæ scarcely as long as the thorax; first joint large, black; second short-obconical, thicker and longer by half than the third; those which follow globose, then rather ovate; five last elongate-elliptical. Thorax cinereous opaque, very delicately and thickly pubescent with dusky, marked in front with two dark brown lines abbreviated at the depression (before the scutellum), besides a fainter line on each side abbreviated in front, and connected (as usual) with some small spots there. Scutellum pitchy, a little glossy at the tip. Wings naked, obscure hyaline, with the thicker veins light yellowish; one cubital areolet; first externo-medial vein nearly interstitial, scarcely retracted. Halteres pale yellowish. Abdomen dingy-white, with an interrupted band down the middle (or a series of spots), and an entire band down each side, blackish-brown. Legs thickly pubescent with dusky; fore femora black, pitchy at the base, with two spines below near the middle; fore tibiæ dark ferruginous, with the base and tip and a ring (sometimes obsolete) before the middle dusky; fore tarsi dusky, with the first two joints ferruginous except the tip; middle legs similarly marked, only the femora towards the base are more clearly ferruginous; the base itself dusky, and the middle ring of the tibiæ is wanting; hind femora black at the base, then ferruginous for about half their length, the tip largely black; tibiæ black, with a broad ferruginous band, ciliated externally; tarsi with the basal joints more obscurely ferruginous; ungues within armed with a very minute tooth. Conf. *C. circumdatus*, Zett. D. Sc. 3658. 41.

"Found at Toome Bridge, Antrim, Derry. (I.)

"*Obs. C. solstitialis*, Winn., differs by the halteres being dusky at the tip, by the colour of the abdomen, and by the pale tarsi, with black joints."—*Hal. MSS.*

Var.? "Thorace cinereo fusco-bilineato, antennis palpis scutelloque fusco-ferrugineis, pedibus ferrugineis fusco-annulatis, halteribus abdomineque albidis, alis nudis hyalinis, areola cubitali unica, femoribus anticis subtus parce spinulosis. Long. $1\frac{1}{3}$; alar. 3 lin.

"Found in September at Newcastle, county Down; banks of River Doddey, Firhouse, Dublin, on the sand-hills."—*Hal. MSS.* In Mr. Haliday's collection. (I.)

80. **flavipalpis,** Winn.! Linn. Ent. vi. 80. 77. pl. 8. f. 75 (1852). *Fœm. niger, nitidus,* palpis flavis, alis hyalinis subfuscescentibus, venis apud costam fuscis, halteribus basi flavescentibus, pedibus nigro-fuscis, tibiis intermediis flavo-cinctis, tarsis albis articulis apice nigris. Long. 1; alar. 2 lin.

Fem. Black, shining. Palpi yellow. Antennæ shining-black; joints from the first to the eighth oval, brown at the base; from the ninth to the thirteenth long, elliptical; first joint longer by half than the second, contracted in the middle. Wings slightly brownish; veins towards the costa brownish. Halteres black, their petioles yellowish at the base. Anterior femora yellowish-brown with blackish-brown tips; hind femora blackish-brown; fore tibiæ brown; posterior tibiæ blackish-brown; middle tibiæ with a yellow band near the tips; tarsi white, their joints with black tips; fore femora armed beneath with four spines.

(E.?)

81. **calceatus,** n. Hal. MSS. "Nigricans, opacus, thorace canobilineato, alis nudis albido-hyalinis, areola cubitali unica, halteribus apice fuscis, femoribus anticis subtus bispinosis, tarsis basi albidis. Long. $1\frac{1}{2}$; alar. $2\frac{3}{4}$ lin.

"Opaque black. Palpi nearly filiform, blackish-brown. Antennæ scarcely as long as the thorax; second joint short, obscure, the following globose, then ovate, the last five elongate-elliptical. Thorax above in front with two faint hoary lines, abbreviate at the depression in front, curved (somewhat brokenly) to join the anterior lateral margin, which also is glossed with grey (shifting with the light). Wings whitish-hyaline, naked; the veins very pale yellowish, almost white; one cubital areolet, which has its radial and costal (the two anterior) sides about equal. Halteres dusky ferruginous, with dark brown tips. Legs black, or pitchy, the first three joints of the tarsi pale-yellowish, or dingy-white, with a dusky dot at the joints; fore femora stouter, with two spines below between the middle and the tip; hind tibiæ not strongly ciliated; ungues with *a very minute* tooth at the base inside.

"Found at Toome Bridge (connecting the counties Antrim and Derry) over the Bann river, near its issue from Lough Neagh. (I.)"—*Hal. MSS.*

"It resembles the following species, which however may be distinguished from it by the characters here mentioned:—

"*C. affinis,* Zett. D. Sc. 3656. 37; and *C. terreus,* Meig. Zw. i. 85. 44. Ground-colour of the thorax grey, the dark colour restricted to the ordinary lines.

"*C. valvatus*, Winn. Glossy. Wings with dark veins; cubital areolet more elongated.

"*C. gracilipes*, Winn. Cubital areolet shorter at the costa.

"*C. albipes*, Winn. Glossy. Cubital and radial veins *near* at the end.

"*C. pratensis*, Meig. Zw. vi. 264; and *C. flavitarsis*, Stæg.; Zett. D. Sc. 3663. Glossy black."—*Hal. MSS.*

82. **pictus,** Meig. Zw. i. 80. 29 (1818).—*elegans*, Winn.! Linn. Ent. vi. 58. 56. pl. 7. f. 56. *Fœm.* schistacco-cinereus, facie nigro-cinerea, thorace vittis tribus fuscis, alis lacteis, halteribus albis apice fuscescentibus, abdomine flavido-albo basi fasciisque nigro-fuscis, pedibus nigro-fuscis, tibiis anticis albo-fasciatis, tarsis albis articulis apice nigris. Long. 2; alar. $3\frac{3}{4}$ lin.

Male. "Broader than any other species of the genus. Face, palpi, and antennæ fuscous. Face shining. Occiput opaque fuscous, with grey bloom. Antennæ clothed only with fine pubescence (not feathered), scarcely longer than the breadth of the head; first joint globose, blackish, with a white apical edge; second obconical, longer than the third, yellowish at the base; following joints oblong; the next a little more slender, ovate; the last three ovate, twice as long and broad as those which precede. Pronotum dull ferruginous, with white gloss. Thorax dark brown, opaque, with hoary bloom. Mesonotum with three broad rust-brown bands, confluent on the back, leaving a patch at each anterior angle, and a line in front (dividing the middle band) of the lighter grey ground-colour. Wings naked, whitish-hyaline; anterior veins pale yellowish, the rest colourless; two cubital areolets, second about twice as long as the first; second branch of præbrachial vein arising before the transverse veinlet. Halteres creamy; base tawny. Abdomen glossy, pitchy; anterior segments somewhat diaphanous, with the base darker and forming a sinuated transverse band; hind edge of posterior segments creamy-white. Hypopygium blackish, much narrower than the abdomen; the joints of nearly equal length; first joint much thicker, conical; second slightly curved, linear, not acute, between them a bilobed process exceeding the tip of the ventral plate. Legs piceous; femora with some minute spines towards the tips beneath; fore pair thickest; hind tibiæ very faintly ciliated; basal joints of the tarsi yellowish, with dusky tips; terminal joints almost entirely dusky; last joint not so long as the two preceding together, armed towards the tip beneath with two spines. Onychia obsolete."—*Hal. MSS.*

Rare. Two specimens of the male found by Mr. Haliday in July near Bexley, in Kent? (E.)

"In my descriptions of *Ceratopogon*, the first externo-median vein mentioned is not the subapical; but the first, not particularly named, which lies next behind it, and in *Ceratopogon* usually springs from the subapical a little beyond the end of the præbrachial areolet, so as to form the first (petiolated) *fork* of the two

which run out on the hind margin; the second being formed by the subanal springing from the pobrachial vein. At other times the first externo-median arises exactly at the end of the præbrachial areolet ("interstitial"), or else (as in most with one entire cubital areolet) from the præbrachial vein, a little before the end of the areolet. I have treated the two strong veins behind the costal as radial and cubital, and the faint vein before them as subcostal (supposing the mediastinal to be obliterated). But if the faint trace of a forked vein towards the apex of the wing figured by Winnertz in a few, is not (as I suppose) a spurious vein, *it* would be the cubital, and my cubital would = the true radial, and my radial would = the subcostal, and my subcostal would = the mediastinal."—*Hal. MSS.*

Genus V. **CLUNIO.**

Clunio, Haliday, Nat. Hist. Review, ii. Proc. 62 (1855).

"*Mas.* Proboscis obsoleta. Antennæ 11-articulatæ, articulis tertio et ultimò elongatis. Alæ alutaceæ, venis duabus furcatis, transversis nullis.

"*Male.* Proboscis obsolete. Antennæ eleven-jointed; third and eleventh joints elongated. Wings adiaphanous, with two forked veins; no transverse veins.

"1. **marinus,** Hal. Nat. Hist. Rev. ii. Proc. 62. pl. 2. f. 4 (1855). *Mas*, obscure ferrugineus, antennis, alis, halteribus pedibusque sordide albis, thoracis lateribus anticis scutelloque flavescentibus. Long. $\frac{4}{5}$; alar. $1\frac{4}{5}$ lin.

"*Male.* Dusky ferruginous. Head rounded, inflected to the præsternum. Mouth obsolete. Eyes rounded; distant above, approximate beneath, the antennæ. Antennæ, wings, halteres, and legs dingy white. Antennæ eleven-jointed, shorter than the thorax; the short joints rather dusky; the basal joints subglobose; the terminal ovate; the third and last elongate, this elliptical. Thorax projecting over the head; scutellum and sides of the thorax before the wings pale yellowish; mesonotum divided by two parallel sutures, with an elevated line down the middle, and a depression before the convex semicircular scutellum; metathorax very short; mesosternum gibbous. Wings adiaphanous, naked, except the pubescent margin; præbrachial vein bifurcated about the middle, embracing the apex with its branches; pobrachial forked near the margin, with the hinder branch (or the subanal vein) recurved, ending at the posterior margin; radial-cubital vein fainter between the præbrachial and the costa, ending at about the middle of the latter; anal vein simple. Abdomen dusky, with nacreous gloss, shorter than the thorax, dilated backwards; the segments linear-transverse. Hypo-

pygium as long as the abdomen, and thicker; lateral arms massive, oblong, with a smaller malleoliform piece articulated to the end; below them an oblong plate, rounded at the tip. Legs of moderate length; fore pair distorted at the base; coxæ ferruginous; extreme base of the tibiæ blackish; tarsi shorter than the tibiæ; anterior pairs with the first joint long, the following three very short; hind pair with the third joint also elongated.

"Inhabits the sea-coast, among the moist gravel bared by the ebbing tide; walks about with the wings raised, and half expanded, in constant vibration, but without taking flight, as far as observed."—*Haliday*. July. Holywood (Down); Valentia Ferry (Kerry). (I.)

Family VII. CULICIDÆ.

Culicidæ, Steph. Syst. Cat. ii. 232 (1829); Curt.; Westw.; Hal. *Tipulariæ culiciformes* p., Meig. *Culicides*, Latr.; Mcq.; Zett. *Culicina* p., Newm. *Culicina*, Agass. *Culicinæ*, Rond.

Ocelli nulli. Mesothoracis scutum integrum. Alæ oblongæ, incumbentes, apice rotundatæ; margo posticus squamis fimbriatus; vena costalis circum marginem posticum attenuata; venæ apicales plusquam sex.

Ocelli none. Scutum of the mesonotum undivided. Wings and halteres developed. Wings oblong, rounded at the tip, incumbent; hind margin fringed with scales; costal vein attenuated round the hind margin; veins in their last subdivisions more than six.

This family contains the five following genera:—

a. Proboscis long, with mandibles and maxillæ.
  b. Palpi short in the female.
    c. Palpi short in the male. 1. Aëdes.
    c c. Palpi long in the male. 2. Culex.
  b b. Palpi long in the male and the female. 3. Anopheles.
a a. Proboscis short, without mandibles or maxillæ.
  b. Metatarsus longer than the second joint. 4. Corethra.
  b b. Metatarsus shorter than the second joint. 5. Mochlonyx.

Genus I. **AËDES.**

Aëdes, Hoffm.; Meig. Zw. i. 13 (1818); Mcq.; Stæg.; Zett.

Corpus elongatum, parvum, pubescens. Caput parvum. Oculi transversim lunati, supra antennas conjuncti. Proboscis porrecta, antennarum longitudine. *Palpi brevissimi*. Antennæ 14-articulatæ, porrectæ, filiformes, thoracis longitudine. Thorax subconvexus,

antice paullo depressus. Alæ angustæ, elongatæ, incumbentes, abdominis longitudine, apud venas squamosæ. Abdomen pilosulum, thorace duplo longius. Pedes graciles, sat longi, subnudi, inermes; tibiæ tenuiter spinulosæ, ungues parvi. *Mas.* Antennæ plumosæ. Forceps analis modice longa. *Fœm.* Antennæ breviter pilosæ. Forceps analis brevis.

Body elongate, small, pubescent. Head small. Eyes transversely lunate, connected above the antennæ. Proboscis porrect, as long as the antennæ. *Palpi very short.* Antennæ fourteen-jointed, porrect, filiform, as long as the thorax. Thorax slightly convex, rather depressed in front. Wings elongated, narrow, incumbent, as long as the abdomen; veins fringed with scales, similar in structure to those of *Culex.* Halteres small. Abdomen slender, slightly pilose, twice the length of the thorax. Legs slender, unarmed, rather long, nearly bare; tibiæ minutely spinulose; ungues small. *Male.* Antennæ plumose. Anal forceps moderately long. *Fem.* Antennæ pilose; hairs short. Anal forceps short.

The only known species of this genus frequents marshy spots, and the larva is probably aquatic.

1. **cinereus,** Hoffm.; Meig. Zw. i. 13. 1 (1818); Mcq.; Stæg.; Zett.; Lehm. Cinereus, thorace rufo-hirto, alis immaculatis, femoribus pallidioribus. Long. 2–2½; alar. 4 lin.

Rare. Found by the Rev. Leonard Jenyns, in Cambridgeshire, and by Mr. Haliday in the county of Cork. (E. I.)

Genus II. **CULEX.**

Culex, Meig. Zw. i. 1 (1818); Steph.; Curt.; Mcq.; Westw.; Zett.; Stæg. *Culex* p., L.; F.; D. G.; Schr.

Corpus elongatum, mediocre, pubescens. Caput parvum. Oculi transversim lunati, supra antennas conjuncti. Proboscis porrecta, antennis paullo longior. Palpi porrecti, 5-articulati. Antennæ 14-articulatæ, porrectæ, filiformes, thoracis longitudine. Thorax elongatus, subconvexus. Scutellum parvum. Alæ angustæ, elongatæ, lanceolatæ, incumbentes, apud venas squamosæ, abdominis longitudine. Abdomen angustum, segmentis octo, thorace duplo longius. Pedes longi, graciles, subnudi, inermes; coxæ breves; tibiæ tenuiter spinulosæ; tarsi postici præsertim longissimi; ungues parvi. *Mas. Palpi proboscide paullo longiores.* Antennæ verticillato-plumosæ. *Fœm. Palpi brevissimi.* Antennæ breviter verticillato-pilosæ.

Body elongated, pubescent, brown, grey, or testaceous, of moderate size. Head small. Eyes transversely lunate, connected above the antennæ. Proboscis porrect, a little longer than the antennæ. Palpi five-jointed, porrect. Antennæ fourteen-jointed, porrect, filiform, as long as the thorax. Thorax elongated, slightly convex. Scutellum

small. Wings narrow, elongated, lanceolate, incumbent, as long as the abdomen; veins fringed with scales; mediastinal vein ending beyond two-thirds of the length of the wing; subcostal ending at a little in front of the tip; radial emerging from the subcostal at before half the length of the wing, forked beyond half its length, its hind fork ending at the tip of the wing; cubital proceeding from the præbrachial transverse veinlet; subapical forked towards its tip; præbrachial, subanal, and anal complete; subaxillary not reaching the border. Areolets fourteen,—the subcostal, the mediastinal, two radial, the cubital, two subapical, the præbrachial, the pobrachial, two externo-medial, the anal, the axillary, and the subaxillary. Posterior margin much excavated, and forming an acute angle at the base. Halteres rather small. Abdomen with eight segments, rather narrow, about twice the length of the thorax. Legs long, slender, unarmed, nearly bare; coxæ short; tibiæ minutely spinulose; tarsi very long, especially the hind pair; ungues small. *Male. Palpi a little longer than the proboscis.* Antennæ verticillate-plumose. *Fem. Palpi very short.* Antennæ verticillate-pilose; hairs short. Eggs elongated, oval, with a small and narrow knot at the top, deposited side by side in small masses. Larva aquatic. Head distinct, rounded, with two inarticulate antennæ and some ciliated appendages. Thorax furnished with bundles of hairs. Abdomen long, nearly cylindrical, much narrower than the thorax, with ten segments; on the eighth a long respiratory organ, which is radiated at the tip; the tenth terminated by setæ, and by five slender conical plates. Pupa active, much curved, swimming by means of the tail and of two terminal natatorial organs; its organs of respiration consisting of two tubular horns on the thorax. Abdomen terminated by two slender oval plates.

"The pupa usually remains suspended with the posterior end of the body turned downwards; but when the period for its change is arrived, it stretches it out upon the surface above which its thorax is elevated. Scarcely has it been a moment in this position than, swelling out the interior and anterior parts of the thorax, it causes it to split between the two respiratory horns. Through this opening the anterior part of the gnat then emerges. As soon as the head and trunk are disengaged, it proceeds with its labour, and gets out more and more, elevating itself by means of its abdominal segments. Numbers now perish, their boats being upset by the wind; but the gnat that escapes, having fixed itself thus perpendicularly, draws first its two anterior legs out of their case and moves them forward, and next the middle pair; then inclining itself towards the water, it rests its legs upon it. As soon as it is thus upon the water, it is in safety; its wings unfold themselves and are dried, and it flies away. The lancets are finer than a hair, very sharp, and barbed occasionally on one side. It is furnished

near the end of its body with an organ which varies in length according to the species, and forms an angle with the last segment but one. The mouth of this organ is tunnel-shaped, and terminates in five points, like a star; and by this it is usually suspended at the surface of the water, and preserves its communication with the atmosphere. In its interior is a tube which is connected with the trachea, and terminates in several openings at the mouth of the organ. The points of the mouth, when the animal is disposed to sink in the water, are used to close it, and cut off its communication with the atmosphere. When the animal is immersed, a globule of air remains attached to the end of the tube, so that it is in fact of less specific gravity than that element, and it is not without some effort that it descends to the bottom; but when it wishes to rise again, it has only to unclose the tube, and it rises without an effort to the surface, and remains suspended for any length of time. Its anal extremity is clothed with bunches of hairs, which are furnished with some repellent material which prevents their becoming wet, and probably causes the dimple or depression of the water round the mouth of the tube. When the larva becomes a pupa, instead of a single respiratory appendage, it is furnished with a pair, each in shape resembling a cornucopia, and proceeding from the upper side of the thorax. By these tubular horns it respires and is suspended at the surface."

This genus, the Gnat or Mosquito, is too well known, from the blood-sucking propensity of the female, to require any particular notice. It is plentiful in all countries, whether arctic or tropical, which abound in wood and water. The female lays about three hundred eggs; nearly a month intervenes between the egg-state and the fly-state, and there are several successive generations in one year.

"Immense swarms of some species have occasionally appeared in England, and at a distance have been mistaken for columns of smoke. Gnats emit no sound when flying early in the spring, before their thirst for blood is awakened. The warmer the weather, the greater is their thirst for blood, the more forcible their flight, the motion of their wings more rapid, and the sound produced by that motion more intense."

a. Tarsi with pale bands.
  b. Veins of the wings with five tufts of scales. Species 1.
  b b. Veins of the wings not tufted. Species 2–4.
a a. Tarsi without bands.
  b. Knees with white spots. Species 5.
  b b. Knees without spots. Species 6–9.

1. **annulatus,** F. Mant. Ins. ii. 363. 2 (1787); Gmel.; Vill.; Lam.; Latr.; Meig.; Steph.; Mcq.; Zett.; Gim.; Stæg. — *affinis*, Steph. Fuscus, thorace vittis duabus nigricantibus, alis subcinereis nigro quinquefasciculatis, abdomine fasciis albidis, pedibus testaceis, tarsis fasciis albidis. Long. $3\frac{1}{2}$–4; alar. 6–$6\frac{1}{2}$ lin.

Brown. Proboscis testaceous, brown towards the tip. Thorax with two blackish stripes. Wings slightly greyish; veins and borders fringed with black scales, which form five tufts on the forks of the veins. Abdomen with a whitish band on the fore border of each segment. Legs dull testaceous; femora and tibiæ irregularly marked with black, their tips black; tarsi black, with five whitish bands. *Male.* Palpi blackish, testaceous from a little beyond the middle to the tips, with a whitish band a little before the middle. Antennæ whitish, with black bands and tips. *Fem.* Antennæ black.

Generally distributed. Frequents houses. (E. S. I.)

2. **cantans,** Hoffm.; Meig. Zw. i. 6. 6 (1818); Steph.; Mcq.; Zett.; Gim.; Stæg.—*maculatus*, Meig.; Steph. *Ferrugineus, thorace vittis duabus fuscis, alis sublimpidis, abdomine* nigro-fusco *fasciis albidis,* pedibus testaceis, tarsis nigris albo-fasciatis. Long. $3\frac{1}{2}$–4; alar. 6–$6\frac{1}{2}$ lin.

Ferruginous. Thorax with two brown stripes. Pectus with whitish tomentum. *Wings nearly limpid;* veins and borders fringed with brown scales. *Abdomen* blackish-brown; *a whitish band on the fore border of each segment.* Legs testaceous, pubescent; tarsi black, with a white band at the base of each joint; metatarsus mostly testaceous. *Male.* Palpi testaceous, with two whitish bands, black, and with black hairs towards the tips. Antennæ whitish, with black bands and tips. Abdomen whitish along each side. *Fem.* Antennæ brown, testaceous towards the base.

Not common. (E.)

3. **annulipes?** Meig. Zw. vi. 241. 15 (1830); Gim.; Stæg.; Zett. *Mas, nigro-fuscus, alis sublimpidis, abdomine fasciis albidis,* pedibus testaceis, tarsis fuscis albo-fasciatis. Long. $2\frac{1}{2}$; alar. 4 lin.

Male. Blackish-brown. Palpi blackish, with two white bands. Antennæ whitish, with black bands and tips. Thorax with pale down. Pectus with whitish tomentum. *Wings nearly limpid;* veins and borders fringed with brown scales. *Abdomen blackish-brown; a whitish band on the fore border of each segment, dilated angularly on each side.* Legs testaceous; tarsi brown, with a white band at the base of each joint.

Rare. In the British Museum. (E.) *This species* much resembles *C. cantans, but is smaller, the legs are more slender, and the tarsi proportionately much longer.*

4. **fumipennis,** Steph. Zool. Journ. i. 453. 5 (1825). *Fœm. rufo-testaceus, thoracis dorso fusco subvittato,* alis *subcinereis, abdomine fusco,*

fasciis ventreque testaceis, pedibus testaceis, tarsis nigricantibus fasciis albidis. Long. 4; alar. 6½ lin.

Fem. Reddish-testaceous. Thorax above brown, indistinctly striped. Antennæ brown, with a whitish band at the tip of each joint. *Wings slightly greyish;* veins brown, fringed with brown hairs. *Abdomen brown, testaceous beneath and on the fore border of each segment.* Legs testaceous; femora and tibiæ with blackish tips; tarsi blackish, with a whitish band at the base of each joint.

Rare. In the British Museum. (E.) *This species* much resembles *C. cantans, but may be easily distinguished by the much greater length of the fork of the subapical vein.*

5. **nemorosus,** Meig. Zw. i. 4. 3 (1818); Steph.; Mcq.; Zett.; Gim.; Stæg.—*reptans,* Meig. Klass.—*fasciatus,* Meig. Klass.—*guttatus?* Mcg.; Meig.; Curt.! B. E. 537.—*ornatus?* Hoffm.; Meig.; Mcq.; Stæg.; Zett. — *lateralis?* Meg.; Meig.; Gim. — *sylvaticus,* Meig.; Steph. Nigricans, thorace fasciis duabus albidis, alis cinereis, abdomine fasciis aut maculis lateralibus albis, pedibus nigris, femoribus testaceis apice nigris, genubus albo-punctatis. Long. 3–3½; alar. 5–6 lin.

Blackish. Thorax with two whitish stripes. Wings grey; veins black, fringed with black hairs. Legs black; femora pale testaceous, black towards the tips; a snow-white spot on each knee. *Male.* Palpi testaceous towards the base. *Fem.* Colours more marked, legs stouter than those of the male. Lancets testaceous. Abdomen with white bands, which are generally more or less interrupted in the middle, and form triangular spots on each side.

Inhabits woods, and does not infest houses like *C. annulatus* and *C. ciliaris.* (E.)

6. **detritus,** Hal. Ent. Mag. i. 151 (1833). *Nigro-fuscus, alis nigro-squamosis, abdomine pallido-annulato, ventre luteo trifariam fusco-punctato,* femoribus basi luteis. Long. 2½–3; alar. 4½–5 lin.

Blackish-brown. Disc of the thorax nearly bare. *Wings thickly clothed with dusky black scales. Abdomen with pale bands; under side pale, with three rows of brown punctures.* Femora luteous at the base.

"In multitudes during the day among hedges on the sea-coast; in the evening, in columns about the tops of trees, appearing like smoke at the distance of a furlong. It is attached particularly to water-cuts in the neighbourhood of the sea. The reddish gnat (*C. ciliaris,* L.) is more general, and enters more into houses, but I have not observed it in such clouds as *C. detritus.*"—*Hal. MSS.*

7. **ciliaris,** L. S. N. 2. 1002. 2 (1767); Schr.; Gmel.; Zett.—*pipicus,* Geoff.; Vill.; Schr.; Meig.; Steph.; Mcq.—*rufus?* Hoffm.; Meig.; Steph.—*domesticus?* Germ.; Meig.; Steph. *Ferrugineus, thorace vittis duabus canis, alis subcinereis, abdomine fasciis testaceis,* pedibus testaceis, tarsis fuscis. Long. 2½–3; alar. 4½–5 lin.

Ferruginous. Proboscis testaceous, black towards the tip. *Thorax with two hoary stripes. Wings very slightly greyish;* veins brown, fringed with brown hairs. *Abdomen with a testaceous band on the fore border of each segment.* Legs testaceous; tarsi brown. *Male.* Palpi testaceous, black towards the tips. Antennæ testaceous, with black rings. *Fem.* Palpi and antennæ black. Abdominal bands narrower and more clearly marked than those of the male.

The House Gnat. Generally distributed. (E. S. I.)

8. **bicolor,** Meg.; Meig. Zw. i. 9. 13 (1818); Steph.; Gim.—*flavirostris,* Steph.—*punctatus,* Meig.?; Gim.?; Steph.—*marginalis,* Steph. *Fœm. Ferrugineus, thoracis dorso fusco, alis sublimpidis, abdomine testaceo suturis nigricantibus,* pedibus testaceis, tibiis tarsisque fuscis. Long. 3; alar. 5½–6 lin.

Fem. Ferruginous. Antennæ blackish. *Thorax brown above,* with pale down. *Wings nearly limpid;* veins brown, and fringed with brown hairs. *Abdomen testaceous; sutures of the segments blackish.* Legs testaceous; tibiæ and tarsi brown; posterior tibiæ testaceous about the middle.

Not rare. (E.)

9. **lutescens,** F. Sp. Ins. ii. 470 (1781); Vill.; Gmel.; Meig.; Steph.; Gim. *Testaceus, thoracis dorso ferrugineo vittis duabus obscurioribus, alis limpidis.* Long. 3; alar. 5½–6 lin.

Testaceous. Proboscis black towards the tip. *Thorax above ferruginous, with two darker stripes. Wings limpid,* with a pale yellowish tinge in front; veins pale. *Male.* Palpi black towards the tips. Antennæ with black rings. *Fem.* Palpi and antennæ black.

Not rare. (E.) This and *C. bicolor* may be varieties of one species, or both may be varieties of *C. ciliaris.*

Genus III. **ANOPHELES.**

Anopheles, Meig. Zw. i. 10 (1818); Steph.; Curt.; Meq.; Hal.; Zett.; Westw.; Stæg.; Loew. *Culex* p., L.; F.; Schr.; Gmel.; Meig. Kl.

Corpus elongatum, mediocre, pubescens. Caput parvum. Oculi transversim lunati, supra antennas conjuncti. Proboscis porrecta, antennis paullo longior. *Palpi porrecti, proboscidis longitudine.* Antennæ 14-articulatæ, porrectæ, filiformes, thorace vix breviores. Thorax elongatus, subconvexus, ante scutellum impressus. Scutellum parvum. Alæ angustæ, elongatæ, lanceolatæ, incumbentes, apud venas squamosæ, abdominis longitudine. Abdomen angustum, segmentis octo, thorace duplo longius. Pedes longissimi, gracillimi, subnudi, inermes; coxæ breves; tibiæ tenuiter spinulosæ; tarsi postici præsertim longissimi; ungues parvi. *Mas.* Palpi 5-articulati; articuli quartus et

quintus dilatati, ad latera reflexi. Antennæ plumosæ. *Fœm.* Palpi 4-articulati, simplices, recti, subnudi. Antennæ breviter pilosæ.

Body elongated, pubescent, grey or testaceous, of moderate size. Head small. Eyes transversely lunate, connected above the antennæ. Proboscis porrect, a little longer than the antennæ. *Palpi porrect, as long as the proboscis.* Antennæ fourteen-jointed, porrect, filiform, almost as long as the thorax. Thorax elongated, slightly convex, impressed in front of the scutellum, which is small. Wings narrow, elongated, lanceolate, incumbent, as long as the abdomen; veins fringed with scales, in structure like those of *Culex*. Halteres small. Abdomen with eight segments, narrow, about twice the length of the thorax. Legs very long and slender, unarmed, nearly bare; coxæ short; tibiæ minutely spinulose; tarsi very long, especially the hind pair; ungues small. *Male.* Palpi five-jointed; fourth and fifth joints dilated, laterally reflexed. Antennæ plumose. *Fem.* Palpi four-jointed, simple, straight, nearly bare. Antennæ pilose; hairs short. Larva differing from that of *Culex* in having two oval tubercles behind the head, and two smaller tubercles near the tail, beneath which there are many long setæ.

This genus much resembles *Culex* in appearance, but the species are comparatively scarce, and the females are not blood-suckers.

1. **bifurcatus,** L. F. S. ii. 1002 (1767); F.; Schr.; Gmel.; Meig.; Steph.; Hal.; Curt.; Mcq.; Zett.; Gim.; Stæg.; Loew.—*trifurcatus*, F.—*claviger*, Meig. Kl.; F.—*plumbeus*, Steph.; Hal. Fuscus, thorace vittis quatuor albidis, alis sublimpidis, *venis fuscis fuscoque ciliatis*, abdomine pallide fusco fasciis obscurioribus, pedibus testaceis, genubus albidis. Long. 3–3½; alar. 6–7 lin.

Brown. Proboscis black at the tip. Palpi testaceous. Thorax with four whitish stripes. Wings nearly limpid; *veins brown, fringed with brown hairs.* Abdomen pale brown; hind borders of the segments darker. Legs dull testaceous; knees whitish. *Male.* Antennæ testaceous, with brown rings.

Not rare. (E. I.)

2. **maculipennis,** Meig. Zw. i. 11. 2 (1818); Steph.; Hal.; Curt.; Mcq.; Zett.; Gim.; Stæg.; Loew.—*bifurcatus*, Meig. Kl.—*grisescens?*, Steph. Fuscus, thorace vittis quatuor testaceis, alis sublimpidis, *venis fuscis ciliis fasciculisque nigricantibus*, pedibus fuscis, femoribus testaceis, genubus tibiisque apice albidis. Long. 3½; alar. 7 lin.

Brown. Proboscis testaceous. Thorax with four testaceous stripes. Wings nearly limpid; *veins brown, fringed with blackish hairs, which are thickest and longest about the middle, near the costa, and towards the tips.* Legs brown; femora testaceous; knees and tips of the tibiæ whitish. *Male.* Antennæ testaceous, with black bands.

Not rare. (E. I.)

Genus IV. **CORETHRA.**

Corethra, Meig. Illig. Mag. (1803); Latr.; Panz.; Meig.; Steph.; Meq.; Zett.; Gim.; Stæg.; Westw. *Tipula* p., L.; F. E. S.; D. G.; Gmel.; Meig. Kl. *Chironomus* p., F. S. A. *Tanypus* p., Lam.

Corpus mediocre aut parvum, elongatum, pubescens. Caput parvum, sessile. Oculi transversim lunati, subremoti. Os parvum, subelongatum. Proboscis antennis multo brevior. Palpi 4-articulati, cylindrici, pubescentes, incurvi, articulus primus brevis. Antennæ 14-articulatæ, porrectæ, filiformes, thoracis longitudine. Thorax longiovatus. Scutellum mediocre. Alæ angustæ, pubescentes, incumbentes, squamis ciliatæ, abdomine paullo breviores. Abdomen segmentis 8, gracile, elongatum, pilosum. Pedes graciles, pubescentes, inermes, sat longi. *Mas.* Antennæ verticillato-plumosæ. Abdomen apice valvulis duabus foliaceis subincurvis sat longis instructum. *Fœm.* Antennæ verticillato-pilosæ. Abdomen apice hamulis duobus brevibus instructum.

Body of moderate size, elongate, pubescent. Eyes transversely lunate, separate in both sexes. Mouth small, slightly elongate. Proboscis much shorter than the antennæ, with two apical clavate appendages. Palpi four-jointed, cylindrical, pubescent, shorter than the antennæ; first joint shorter than the others. Antennæ fourteen-jointed, porrect, filiform, as long as the thorax. Thorax elongate-oval. Scutellum of moderate size. Wings narrow, pubescent, a little shorter than the abdomen, incumbent during repose; veins fringed with scales; mediastinal vein ending at about half the length of the wing; subcostal ending at full five-sixths of the length; radial springing from the subcostal at before half the length of the wing; its two forks ending at the tip of the wing; cubital proceeding from the præbrachial transverse veinlet; subapical forked towards its tip; præbrachial, subanal, and anal complete; posterior margin excavated at the base. Abdomen slender, elongate, hairy, with eight segments. Legs slender, moderately long, pilose, unarmed; fore pair not remote from the others; coxæ of moderate size; ungues very small; onychia almost obsolete. *Male.* Antennæ verticillate-plumose, the whorls from the base to the tips successively decreasing in length. Abdomen with two apical, slightly curved, foliaceous appendages, nearly as long as one of the segments. *Fem.* Antennæ verticillate-pilose; hairs short and few. Abdomen with two little apical curved hooks, which are not longer than a quarter of one of the segments.

"The larva of *Corethra plumicornis* is so beautifully transparent as to resemble a piece of crystal, and scarcely to be distinguished from the water in which it lives. It is vermiform, very long, with rather thicker thoracic segments. The head is small, conical, turned upwards, furnished with two deflexed hooks, which

are articulated at the tip, and with two short palpi. The abdomen has a fan of hairs at the tip beneath. The pupa somewhat like that of *Culex*, but straight, and with pointed thoracic appendages.

"The larva of *C. culiciformis* much resembles that of *Culex pipiens* in form, but differs from it in its motions and station of repose. Instead of being suspended at the surface with its head downwards, it usually, like fishes, remains in a horizontal position in the middle of the water. When it ascends to the surface it is always by means of a few strokes of its tail, so that its motion is not equable, but by starts. It descends again gradually by its own weight, and regains its equilibrium by a single stroke of the tail. Its anus is furnished with a pair of oars or natatory laminæ, by which it rises to the surface. The tracheæ appear to proceed from a pair of oblong vesicles of considerable size in the thorax, and towards the anus they form two other smaller ones."

a. Tarsi not dotted.

b. Antennæ with brown bands. Species 1.

b b. Antennæ without bands. Species 2.

a a. Tarsi dotted. Species 3.

1. **plumicornis,** F. E. S. iv. 246. 58 (1792); Meig.; Meq.; Guér.; Zett.; Gim.—*cristallina*, D. G.—*lateralis*, Latr.; Panz.; Lam.; Meig. Kl. Zw.—*hafniensis*, Gmel. *Mas et Fœm.* fusca, *antennis testaceis fusco-cinctis*, thoracis vittis duabus lateralibus pectoreque albidis, alis subcinereis, venis pedibusque testaceis, halteribus albis, abdomine pallide fusco; *Mas, antennarum plumis testaceis.* Long. 3; alar. 5 lin.

Brown. *Antennæ testaceous, with brown bands.* Thorax with a whitish stripe on each side. Pectus whitish. Wings slightly greyish; veins and borders thickly ciliated, the former testaceous. Halteres white. Abdomen pale brown, hairy. Legs pale testaceous, pubescent. *Male. Plumes of the antennæ testaceous.*

Generally distributed. (E. S. I.)

2. **culiciformis,** D. G. Ins. iv. 144. 16. pl. 23. f. 3–5 (1783); Latr.; Lam.; Meig.; Meq.; Lehm. *Mas et Fem.* obscure fusca, *antennis nigris*, thoracis lateribus pectoreque pallide testaceis, alis subcinereis, venis pedibusque testaceis; *Mas, antennarum plumis* nigris. Long. 3; alar. 5 lin.

Dark brown. *Antennæ black.* Pectus and sides of the thorax pale testaceous. Wings slightly greyish; veins and borders thickly ciliated, the former testaceous. Halteres white. Abdomen brown, hairy. Legs testaceous, pubescent; tibiæ pilose. *Male. Plumes of the antennæ black.*

Not generally common, but sometimes appearing in great profusion. (E. S. I.)

3. **pallida,** F. E. S. iv. 245. 56 (1792); Gmel.; Panz.; Meig.; Mcq.; Stæg.; Zett. *Mas*, pallide testacea, gracilis, *antennis albidis nigro-cinctis*, thorace vittis tribus testaceis, alis pedibusque albidis, venis halteribusque albis, venula transversa fusco-nebulosa, abdominis segmentis nigro-marginatis, pedibus nigro-punctatis. Long. 2½; alar. 6 lin.

Male. Pale testaceous, slender, very pilose. Antennæ whitish, not thickly plumose, with a blackish band on each joint. Thorax with three darker testaceous stripes. Wings whitish, deeply ciliated along the hind border; veins white, very pubescent; transverse veinlets clouded with pale brown. Halteres white. Abdomen with a slender black band on the hind border of each segment. Legs whitish, pubescent, slender; femora with nine, and tibiæ with seven, black bands.

Rare. In the British Museum. (E.)

Genus V. **MOCHLONYX.**

Mochlonyx, Loew, Ent. Zeit. Stett. v. 121 (1844). *Corethra* p., Ruthé.

Corethræ valde affinis. Os longius. Os et rostrum conjunctim capite longiora. Rostrum proboscide vix brevius. Palpi 4-articulati, proboscide duplo longiores; articulus primus brevis; quartus tertio paullo longior. Antennæ 16-articulatæ; articuli primus et secundus breves, moniliformes; tertius sequentibus longior et crassior; ultimus linearis. Ungues graciles, acuti, dente gracili acuto basali.

Rostrum almost as long as the proboscis. Mouth along with the rostrum longer than the rest of the head. Palpi four-jointed, twice as long as the proboscis; first joint short; fourth a little longer than the third. Antennæ sixteen-jointed; first and second joints short, moniliform; third longer and thicker than those which follow; the single joints incrassated at the base, verticillate; they increase in length to the last, which is linear. Wings distinctly but finely veined; two furcated veins, with their fork nearly equidistant from the base of the wing, and therefore that of the anterior further from the margin, as long as one-third of the wing; the branches more than twice as long as the petiole; brachial areolets coterminous; the pobrachial irregular at the apex; posterior vein (subanal) inflected at an angle a little before the margin, and running along the margin towards the apex of the wing; this vein, as usual, doubled by a spurious one; one longitudinal vein behind it. Ungues slender, acute, one-third of the length of the fifth tarsal joint; a slender acute tooth at the base, half as long as the ungues. The wings are nearly as in *Corethra*, only the transverse veinlets rather more distant from the margin. The figure, development of the mesosternum, and antennæ much alike; the mouth longer and more deflected.

1. **effœtus,** Hal. MSS. *Fœm.* ferrugineus, subaureo-pubescens,

palpis fuscis, antennis fusco-ferrugineis, thoracis abdominisque suturis subfuscescentibus, alis hyalinis apud costam subflavescentibus, femoribus posticis apices versus subfuscescentibus. Long. 2; alar. 4 lin.

Fem. Ferruginous, clothed with yellowish down, almost of a golden gloss; the hairs on the abdomen longer. Front thickly clothed with yellowish hairs. Rostrum thickly clothed with fusco-ferruginous hairs. Palpi fuscous. Antennæ fusco-ferruginous, paler at the base. Sutures of the thorax delicately marked with fuscous; hind edge of the abdominal segments and lateral line darker. Pleuræ paler. Wings hyaline, a little yellowish towards the costa; veins pale fusco-ferruginous. Halteres pale, with a fuscous dot at the tip. Tentacles of the vagina small, with a dusky dot at the tip. Legs pale ferruginous, with fuscous hairs; hind femora before their tips very slightly embrowned.

Very rare. Two females in Mr. Clifton's collection. (E.)

Family VIII. PHLEBOTOMIDÆ.

Phlebotomidæ, Hal. Ins. Brit. Dipt. i. 7 (1851). *Tipulariæ noctuæformes*, Meig. *Psychodites*, Newm. *Phalenoides*, Mcq. *Psychodides*, Zett. *Tipulariæ* p., Agass. *Phlebotomini*, Rond. *Tipularia Gallicola Polyneura* (*Psychodina*), Loew.

Ocelli nulli. Mesothoracis scutum integrum. Alæ ovatæ aut lanceolatæ, deflexæ aut divaricatæ; vena costalis circa marginem posticum attenuata; venæ apicales plus quam sex.

Ocelli none. Scutum of the mesonotum undivided. Wings and halteres developed. Wings ovate or lanceolate, deflected or divaricated; costal vein attenuated round the hind margin; veins in their last subdivisions more than six.

Some of the foreign species of this Family are blood-suckers, and allied to the *Culicidæ;* others are of larger size, and allied to the *Tipulidæ*. I am indebted to Mr. Haliday for all the following characters of the genera and species of this Family. The mandibles are lancet-like in all the British genera, but in *Phlebotomus* they, like the maxillæ, are lancet-like. The ossiculi of the wings, and the alulæ, are unusually protruded, the latter with a strong secondary crease, which, with the abrupt termination of the ossicles, determines a flexible fold near the base of the wing, which thus often hangs down by the sides in the dead insect. The tentacles are horny, and applied flat to each other, usually pointed, and forming a borer like that of *Tipulidæ*. The male has a double pair of grapplers, each two-jointed, and armed at the end with a claw (sometimes compound), the lower pair largest.

The genera may be grouped thus:—

a. The two forked veins (radial and externo-medial) having between them two simple veins (a double cubital). (Eyes lunate, approximate in front. Mediastinal vein faintly connected with the subcostal not far from the base of the wing, and then vanishing, or prolonged faintly and gradually converging to the costal. Female with a slender, pointed, ascending borer.)

b. Proboscis compressed, with maxillæ nearly as long. Wing pointed exactly at the end of the second simple vein. Larva pale, terrestrial; the last segment slender, much elongated. 1. PSYCHODA.

b b. Proboscis with broad pouting liplets. Maxillæ obsolete. Labrum shorter than the labium. Larva blackish; last segment little elongated, jagged at the end, and ciliated with radiating hairs.

c. Wings broad, ovate, with an upward bellying sinus in the middle (distorting the two intermediate simple veins) in the male. Larva with two double rows of lanceolate (gill-like) plates down the back. 3. ULOMYIA.

c c. Wings even in the male and in the female. Larva with two bands of curved hairs down the back. 2. PERICOMA.

a a. The two forked veins having between them one simple vein (cubital). Mediastinal vein bent back to join the costal opposite its connection with the subcostal. Brachial arcolets distinctly closed. Wings rounded at the tips. Eyes rounded, distant in front.

b. Hindmost vein (subanal?) not much shorter than the rest. (Antennæ with obconical joints, twelve-jointed.) 4. TRICHOMYIA.

b b. Hindermost vein abbreviated. (Antennæ with linear joints, fifteen-jointed?) 5. SYCORAX.

Obs. Fabricius has observed the maxillæ. The dissections in Curtis's Brit. Ent. 745 are from a *Pericoma,* the wing that of *Pericoma canescens.*

Genus I. **PSYCHODA.**

PSYCHODA, Latr. Dict. H. N. xxiv. 189. 518 (1796); F. S. A.; Meig.; Meq.; Curt.; Hal.; Westw.; Zett.; Ross. (V.) *Tinearia,* Schell. *Tipula* p., L.; D. G.; Retz.; Müll.; Ross.; F. E. S.; Scop.; Schr. *Bibio* p., Geoff.; Müll. *Trichoptera,* Meig. Kl.

Corpus oblongo-ovatum, parvum aut minimum, undique dense villosum. Caput minutum, sessile. Oculi lunati. Proboscis brevis. Palpi 4-articulati, exserti, incurvi, pubescentes; articuli æquales. Antennæ circiter 12–16-articulatæ, porrectæ, verticillatim pilosæ, moniliformes, thorace paullo longiores; articuli primus et secundus crassiores. Thorax rotundatus. Alæ obovatæ, latæ, deflexæ, valde hirsutæ; venulæ transversæ nullæ. Abdomen cylindricum, segmentis octo. Pedes breves, inermes, crassiusculi; tibiæ apice non calcaratæ.

Body oblong-oval, small or very small, wholly and thickly villose. Head small, sessile. Eyes lunate. Proboscis short, compressed. Man-

dibles obsolete. Labrum and maxillæ as long as the labium; maxillæ lancet-like. Palpi four-jointed, exserted, pubescent, curved downward; joints of equal length. Antennæ with from twelve to sixteen joints, porrect, moniliform, verticillate-pilose, a little longer than the thorax; first and second joints stouter than the rest. Thorax nearly round. Wings obovate, broad, deflexed, very hairy, without transverse veinlets; mediastinal vein rudimentary; subcostal a little more than half the length of the wing; radial proceeding from near the base of the cubital, forked before one-third of its length; cubital ending at the tip of the wing; subapical ending at a little behind the tip; two externo-medial veins formed by a fork of the præbrachial; anal, axillary, and subaxillary veins complete; humeral veinlet near the base. Areolets thirteen,—the humeral, the subcostal, which is mostly united to the mediastinal, two radial, the cubital, the præbrachial, which is very short, the pobrachial, the subapical, two externo-medial, the anal, the axillary, and the subaxillary; posterior margin not excavated, nor indented towards the base. Halteres of moderate size. Abdomen cylindrical, with eight segments. Legs short, unarmed, rather thick; tibiæ without apical spurs.

The species of this genus resemble little moths; their wings being generally thickly covered with hairs. Some are very abundant during the winter months when the weather is mild. When walking up glass they move alternately from right to left and from left to right, so as to describe small zigzags.

The larva of *P. phalænoides* and that of *P. sexpunctata* inhabit dry cow-dung; they are long, subfusiform, depressed, with a slender, straight, cylindrical tail, which is longer than the preceding segment. The pupa has two short appendages, thickened at the tips behind the head; the abdomen is tapering.

1. **phalænoides,** L. S. N. ii. 977. 47 (1767); F.; D. G.; Geoffr.; Schr.; Müll.; Gmel.; Retz; Lam.; Latr.; Gim.; Ross. (V.)—*nervosa*, Schr.; Meig.; Mcq.; Curt.; Gim.; Perris; Ross. (V.); Zett.—*muraria*, Latr. Canescens, antennis nigro-cinctis, *alis immaculatis*, halteribus albis. Long. $\frac{2}{3}$; alar. 2 lin.

Hoary. Antennæ with black bands. *Wings unspotted.* Halteres white.

The most abundant species, occurring not only on walls and windows, but on shrubs, etc., everywhere; probably breeds in all sorts of vegetable decay. (E. S. I.)

2. **sexpunctata,** Curt.! B. E. 745. 6. pl. 745 (1839).—*phalænoides*, var. Scop.—*phalænoides*, Meig.; Mcq.; Zett.—*marginepunctata*, Roser. Pallide ochraceo-cinerea, pubescens, *alæ fascia fusca, maculis sex aut septem apicalibus.*

Downy, very pale ochreous-grey. Antennæ eleven-jointed?, moniliform. Thorax pale ochreous. *Wings with some of the hairs black,*

forming a pale fuscous fascia before the middle, across which runs an angular mark, white in some lights, as well as six or seven spots along the margin at the apex of the veins; three veins on the costa bearing a black dot each, also three of the alternate veins on the interior margin; cilia pale fuscous. Legs unspotted.

The larva is figured by Bouché and by Perris. "Respiratory auricles of the pupa filiform-curved, communicating with the main trachea by a dilated cylindrical portion of the latter. In the larva ready for transformation they may be seen, through the skin, forming an interrupted ring round the first part of the prothorax, beginning close to the spiracle and bent down till they nearly meet below, the thickened part of the trachea being also visible. According to my observations, the main tracheæ rise from the prothoracic spiracles to the anal points without any intermediate lateral spiracles—as Perris has already stated, differing from Bouché. I found in the larva a pair of glands (ending in a filament at each end) lying loose among some elongate, subcylindric, white, fatty masses in the neighbourhood of the small intestines, nearly as in *Tipula*. These are the rudiments of the reproductive organs."—*Hal.*

Not rare. (E. S. I.)

Genus II. **PERICOMA.**

PERICOMA, Hal. MSS. *Psychoda* p., Meig.; Mcq.; Zett. *Trichoptera* p., Meig. Kl. *Tipula* p.? L.; Gmel.; Lam.

Proboscis brevior, non compressa. Labrum breve. Maxillæ obsoletæ. Antennæ moniliformes. Alæ maris et fœminæ æquales.

Proboscis shorter than in *Psychoda*, not compressed. Labrum short. Maxillæ obsolete. Antennæ moniliform. Wings tense. Larva with rows of hairs; inhabits water, bent into a ring, the tufts of curved hairs detaining a covering of mud.

a. Forked veins unequal. The anterior fork of the radial vein much more distant from the base of the wing than the posterior fork. Wings pointed at the end of the second simple intermediate vein (*i. e.* the first externo-medial). (Wings as in *Psychoda.*) Species 1–3. [The first is the only species of which I have examined the mouth detached, so that probably some of them should be placed with *Psychoda*, agreeing in the wings.]

a a. Anterior fork nearest the base of the wing. Præbrachial areolet closed distinctly at about one-fourth of the length of the wing, nearly opposite the anterior fork. Wings pointed at the end of the first intermediate simple vein (*i. e.* cubital). Antennæ with the first joint elongate. Species 4.

a a a. Forks nearly equidistant from the base of the wing; the præbrachial areolet usually very short and indistinct; the wing either rounded at the tip or the point between the two intermediate simple veins; first joint of the antennæ little longer than the others.

b. Wings rather pointed (lanceolate) (or ovate-lanceolate). Smaller species. Species 5–7.

b b. Wings rounded at the tips, ovate. (Joints of the antennæ after the second less distinctly knotted or petiolated, being rather ovate; the whorls spreading.) Species 8–11.

1. **lucifuga,** n., Hal. MSS. *Testacea, parum hirta, antennis petiolato-globosis corporis longitudine, alis subhyalinis immaculatis, pedibus pallidis, tarsis fuscis.*

Rather longer than *P. phalænoides. Rufo-testaceous, abdomen and halteres brownish. Legs paler;* tarsi and tips of the tibiæ brownish. *Antennæ with the first two joints short, globose, each of the remainder with a dusky globose base and a long pale petiole;* the whorls of hairs long and somewhat incurved, but lax. *Pubescence not abundant, so that the wings appear obscurely hyaline, with dark fringed veins and margin, but without spots.*

Inhabits shady moist spots in woods. In September, at Holywood and at Blarney. (I.)

2. **soleata,** n., Hal. MSS. *Cervino-hirta, alarum ciliis fusco-micantibus basi antice et apice pallidioribus, tarsorum articulis exterioribus albo-micantibus.*

Resembles *P. calceata* with respect to the four exterior joints of the tarsi, which are glossed with yellowish-white, but the acute wings, etc., do not agree with Zetterstedt's description of that species. *It is pretty thickly clothed with fawn-coloured hair,—a couple of rather indistinct fuscous tufts towards the fore edge of the wings, viz. at the fork of the radial, and above the opposite fork of the externo-medial* (second); *the long cilia shift in colour to dusky, except at the apex and the humeral tuft at the base. Antennæ shorter than in the preceding species.*

Rare. In Mr. Dale's collection. (E.)

3. **bullata,** n., Hal. MSS. *Cervino-hirta, abdomine palpis pedibusque plumbeo-micantibus, antennarum verticillis crateriformibus margaritifero-micantibus annulatis, alis cinereo-hirtis, venis posterioribus alternis nigro-ciliatis.*

Scarcely larger than *P. phalænoides. Plumbeous. Vertex, front, dorsum of the thorax, and base of the wings in front with fawn-coloured hairs.* Whorls of the hairs of the antennæ *very coarctate, hiding the joints,* curved inward, cup-shaped, like a bubble, and shifting with opaline tints like a soap-bubble. *Palpi and legs thickly clothed with fine slender plumbeous-shining scales.* Palpi moderately long; second, third, and fourth joints of nearly equal length. Antennæ (thirteen-jointed?) nearly as long as the wings. *Wings with cinereous hairs; radial vein*

before its fork, and cubital on the same line, with black hairs; the alternate veins beyond the middle with black hairs; margin densely ciliated. Halteres brown. *Hairs of the antennæ and of the abdomen plumbeous, very shining; the whorls in certain aspects with yellowish lustre, and varied with purple, brownish at the base.* The simple unguiculi of the upper forceps acute; those of the lower forceps double, equal, nearly straight, obtusely subcapitate.

Very rare. Found by Mr. Haliday at Holywood and at Dublin. (I.)

4. **ocellaris,** Meig. Klass. i. 44. 4 (1804); Zw. i. 105. 4. pl. 3. f. 14; Mcq.; Zett.—*variegata*, Mcq. Tip. D. N. Fr.—*hirta?* L.; Gmel.; Lam. *Albo-hirta, alis lanceolatis nigro-alboque variis, punctis duobus marginalibus ocellaribus.*

With white hairs. Wings lanceolate, varied with black and white, with two ocellated marginal dots. Head with a clavate appendage hid in a tuft of hair behind each eye. Antennæ with the first joint elongate-obconical, one-fourth of the length of the entire joints, or about as long as the fore metatarsus; first and second joints very densely clothed with hair; a black clavate tuft at the tip of the second; tufts before the wings very conspicuous.

Not common. Found by Mr. Haliday at Holywood, Dublin, Cork, and Kerry.

5. **canescens,** Meig. Kl. i. 45. 5 (1804); Zw. i. 106. 5; Mcq. —*Fusca, capite thorace alarumque basi canescentibus, alis lanceolatis disco nigro-bipunctatis; Mas, antennarum basi palpisque atro-hirtis.*

Scarcely as large as *P. phalænoides.* Hairs hoary on the head, thorax, and first half of the wing, dusky elsewhere. Wings with the forks clothed with blacker hairs, making two spots in the middle or an interrupted band, another dot near the base, the ends of the veins also dark, fringe dusky; darker at the fore edge, but lighter or fawn-coloured at the base (humeral) and in front of the apex. Legs dusky, with the whitish scales at the joints very inconspicuous. Antennæ with spreading whorls of fawn-coloured hairs. *Male.* Antennæ nearly as long as the body, the whorls very long; the first two joints and the palpi thickly clothed with black hairs. *Fem.* Borer short, nearly concealed by hairs.

Not uncommon in moist shady groves. (E. I.)

6. **ustulata,** Hal. MSS. *Cervino-hirta, abdomine tibiis tarsisque fusco-annulatis, alis ovato-lanceolatis fusco-punctatis.*

Size of *P. phalænoides*, larger than the others of this section. Clothed with fawn-coloured hairs, the abdomen with interrupted blackish bands. Antennæ ferruginous, with the globose base of the joints after the second dusky, the whorls of hairs yellowish. Wings ovate-lanceolate, with dusky dots, viz. several in a triple transverse series in the first half; two on the forks; the rest at the ends of the veins; fringe chequered dusky and pale; forks of the veins beyond the middle of

the wing; præbrachial areolet defined. Legs yellowish; femora with an indistinct ring towards the tip; tibiæ with the base, apex, and a ring between, dusky; tarsi with the end of the first joint and the last three entirely dusky. *Male.* Antennæ nearly as long as the body. *Fem.* Antennæ longer than the thorax. Borer rather long and slender.

Not rare on the shores of lakes and of the sea, where I have found the pupa in the moist sand. (I.)

7. **trifasciata,** Meig. Kl. i. 44. 3. pl. 2. f. 20 (1804); Zw. i. 105. 8; Latr.; Mcq.; Zett. *Albo-hirta, alis lanceolatis fasciis tribus nigris per fimbriam utrinque continuatis, pedibus albidis, tarsorum articulis extremis* (4) *nigricantibus.*

The "angular" middle black band is produced by the black hairs continued along the first externo-medial veins, almost connecting that band with the outer one.

Var. β. *dealbata.* Albido-hirta, alis nigricante trifasciatis, tarsis apice fuscis.

Not common. (I.) Larger than the preceding. (Wings rather broader?) White colour less clear, and blackish bands less contrasted; dusky tip of the tarsi much less deep in colour, scarcely extending beyond three joints. Perhaps the other sex of the preceding?, or a distinct species?

Var. γ. *deaurata.* Flavido-hirta, alis nigricante trifasciatis, tarsis apice fuscis.

Like var. β, but the hairs are yellow instead of white. "My specimens were taken on bushes in the bed of the River Dodder, near Dublin, but are too much rubbed to afford good characters, though I can scarcely doubt it is a distinct species."

8. **palustris,** Meig. Kl. i. 43. 2 (1804); Zw. i. 105. 2; Mcq.; Zett.—*auriculata,* Hal.; Curt. B. E. 745. f. 9. T.! *Albo-hirta, alis ovatis nigricante trifasciatis, tarsorum articulis extremis nigricantibus.*

Head, thorax, abdomen, and wings clothed with white hairs. Wings with three blackish bands, the second angular, the third occupying the apex; fringe white, with two dusky patches at each margin (corresponding to the middle black band and the outer one, the cilia of the tip remaining white). (Veins of the wings drawn in Curt. B. E. 745.) Legs dusky, clothed with whitish hairs; end of the tibia and metatarsus, and second joint entirely on one side at least glossy-white; the last three joints dusky. When the hairs of the thorax are removed, there appears a clavate appendage at the front of the thorax on each side. (See Curtis's figure.)

According to Meigen this should be the largest species of the genus (2 lines long), which is not the case with mine. Many of the species vary much in size; still this casts some doubt on the determination of mine, which is smaller than *P. nubila.* Common. (I.)

9. **nubila,** Mcg.; Meig. Zw. i. 107. 9 (1818); Zett.—*phalænoides*, Scop.—*ciliatus*, Geoffr.—*hirta*, D. G.; Retz; Latr.—*bombyciformis*,* Schr. *Fusca, cervino-hirta, alis ovatis fuscis albido-maculatis, tibiis apice tarsisque albo-annulatis; Mas, fasciculo frontis erecto aterrimo antice niveo.*

Head, thorax, and abdomen clothed with fawn-coloured hairs (or whitish on the head). *Wings with brown hair; faint brownish dots at the forks and at the end of veins; a whitish spot near the base, two at the anterior margin, one before and one beyond the middle, and several smaller ones towards the hind margin; fringe fuscous, but dingy-whitish towards the end at the tip of the wing* (*not throughout, as in* Ulomyia hirta). Legs fuscous, with long whitish hairs; the end of the tibiæ, the base and the tip of the first basal joint, and the whole of the third on one side, whitish-glossed. *Male.* With a recurved spreading tuft of hairs on the front, very conspicuous from the colour being snow-white before and intense black behind.

Very common; reared from larvæ found on fallen leaves immersed in the water of pools or slow streams. (E. S. I.)

10. **fusca,** Mcq. Tip. N. Fr. 110. 4 (1824); H. N. D. i. 165. 6; Meig.—*phalænoides*, Var.? Schr. *Fuliginosa, alis ovatis postice atro-ciliatis, antennarum basi palpisque atro-hirtis.*

Almost as large as *P. nubila*. Clothed with sooty hairs, the dark tufts at the forks of the wing scarcely marked, but the two hindmost veins of the margin behind them ciliated with deep black hairs; the tuft at the base of the costa hoary. Forks at about two-fifths of the length of the wing. Antennæ with fawn-coloured whorls of hair, the first two joints and the palpi thickly clothed with deep black hairs (in the male only??).

Not common. (I.)

11. **calceata,** Meig. Zw. vi. 272. 11 (1830); Zett. *Nigro-fusca, griseo-villosa, alis ovatis fuliginosis fimbria apicis tarsorumque articulis extremis albidis.*

Blackish-brown, with cinereous hairs. Wings oval, smoky; fringe and the apical joints of the tarsi whitish.

"Resembles the preceding species a good deal, but the fringe at the tip of the wing is whitish, and the exterior joints of the tarsi are glossed-whitish. My specimen, given me by Mr. Dale, is too much injured to afford additions to Meigen's description." —*Hal.*

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* "I have cited this, on account of the carriage of the wings, rather than *Tipula hirta*, Schr. (Fn. B. iii. 82. 2348). This last therefore remains uncertain; also *T. phalænoides*, Schr. (Ins. Austr. 434. 883; Fn. B. iii. 82. 2349), since he appears to have understood *phalænoides*, L., under his *nervosa*. The diagnosis of *phalænoides*, Schr., agrees with *hirta*, Latr., *ciliatus*, Geoffr., but, as I have said, the contrast he expressly draws as to carriage of wings seems to exclude it from the synonyms of *nubila*, Meig."—*Hal.*

Genus III. **ULOMYIA.**

ULOMYIA, Hal. *Saccopteryx*, Hal.; Curt. B. E. 745: (name preoccupied in Mammalia, Illiger.) *Tipula* p., L.; F. E. S. *Psychoda* p., Meig.

Proboscis brevis, non compressa. Labrum breve. Maxillæ obsoletæ. Antennæ moniliformes. *Mas.* Alæ sinu medio convexo.

Proboscis shorter than in *Psychoda*, not compressed. Labrum short. Maxillæ obsolete. Antennæ moniliform. Wings tense. *Male.* Wings with a coriaceous pouch.

The larva lives in clear running water, and has, like a dorsibranchial *Annelid* or *Phyllodoce*, down the back two rows of acute, lanceolate, foliaceous branchia-like appendages; each row consists of three pair on each segment, viz. a pair on each of the three folds or subdivisions of the segment. Otherwise most like the larva of *Pericoma*.

1. **hirta,** L. F. S. ii. 1772 (1761); F.—*fuliginosa*, Meig. Nigrofusca, alis apice maculis tribus albicantibus. Long. $1\frac{1}{4}$; alar. 3 lin.

Blackish-brown. Wings with three apical whitish spots.

Not rare. (E. S. I.) Fabricius expressly mentions the white tip of the wing (in *Pericoma nubila* the cilia of the apex are whitish at the end only, dusky at the base); Linnæus does not; but the chequered *black* and white suits this species better than *P. nubila*. Reared from larvæ found on fallen leaves lying in a waterfall of a clear rivulet.

Genus IV. **TRICHOMYIA.**

TRICHOMYIA, Hal.; Curt. Brit. Ent. 745 (1839). *Phalænomyia*, Loew. *Psychoda* p., Roser; Zett.

Oculi rotundi, remoti. Antennæ 12-articulatæ, articulis obconicis. Alæ apice rotundatæ; areolæ brachiales clausæ; vena postrema abbreviata.

Antennæ filiform; first and second joints thick; the rest longer, somewhat conical. Wings with a complete discal areolet; five external areolets; second petiolated; third complete; brachial areolets not exceeding the first third of the wing; costal areolets half divided; veins very hairy. Valves of the oviscapt broad, ovate.

1. **urbica,** Hal.; Curt. B. E. 745. 8 (1839).—*aurea*, Zett.—*flavescens?* Roser. *Fœm.* fusca, nigro-hirta, fronte thorace et abdominis basi flavo-hirtis, alis flavescentibus nigro-bifasciatis, halteribus pallidis apice nigro-fuscis, femoribus tibiisque flavescentibus.

Fem. Brown. Front, thorax, and base of abdomen clothed with

dark yellow hairs; the rest of the abdomen, antennæ, and legs with black hairs. Wings obscure yellowish, with two black bands. Halteres pale, with blackish-brown knobs. Oviscapt, coxæ, and femora and tibiæ yellowish.

Found about sewers in Dublin and at Holywood. (I.)

Var.? Ferruginous. Antennæ brown, thickly pilose, verticillate, fourteen-jointed, longer than the body. Wings greyish; veins and borders blackish, ciliated. Abdomen and legs blackish. Length of the body one line, of the wings three lines.

Found in Cambridgeshire by the Rev. Leonard Jenyns. (E.)

Genus V. **SYCORAX.**

SYCORAX, Hal.; Curt. Brit. Ent. 745 (1839). *Posthon*, Loew.

Corpus fere nudum. Antennæ graciles, pubescentes; articulus primus brevissimus; secundus globosus; tertius et sequentes lineares. Alarum venæ tantum pubescentes; areolæ externæ quinque, secunda petiolata, quinta incompleta; costales tres; brachiales duæ, alæ medium attingentes.

Body nearly bare. Antennæ slender, pubescent; first joint very short; second globose; the rest linear; discal areolet incomplete; veins only pubescent; mediastinal vein nearly one-third of the length of the wing, forked and angular at its tip, and thus connected with the costa and the subcostal vein; subcostal about three-fourths of the length of the wing; radial emerging from the subcostal opposite the tip of the mediastinal, forked a little beyond two-thirds of the length of the wing; cubital emerging from the angle of the transverse veinlet which bounds the præbrachial areolet, and ending at the tip of the wing; subapical ending on the hind border, forked at a little beyond half the length of the wing; externo-medial proceeding from the transverse veinlet which bounds the pobrachial areolet; anal complete; axillary and subaxillary imperfect. Areolets twelve,—the humeral, the subcostal, the mediastinal, two radial, the cubital, the præbrachial, which is rather less than half the length of the wing, the pobrachial, which is much shorter than the præbrachial, the subapical, two externo-medial, and the axillary, from which the subaxillary is hardly distinct. Posterior margin not excavated nor indented towards the base.

Larva unknown, probably aquatic.

1. **silacea,** Hal.; Curt. Brit. Ent. 745. 10 (1839). *Mas*, pallide ochracea, minima, alis obscure hyalinis.

Male. Very minute. Pale ochre. Wings obscure hyaline.

Found by Mr. Haliday, about shady rivulets and watercourses, at Holywood. (E. I.)

The two following additional species of this Family have been also recorded as British :—

1. Psychoda tristis, *Meig.* Zw. vi. 272. 10 (1830).
2. Psychoda humeralis, *Hoffm.; Meig.* Zw. i. 166. 7 (1818).

Family IX. HETEROCLITÆ.

Heteroclitæ, Hal. I. B. D. i. 7 (1851). *Tipulariæ Fungicolæ* p., Meig. *Mycetophilinæ* p., Zett.

Ocelli nulli. Antennæ setaceæ, basi globoso-incrassatæ. Mesothoracis scutum integrum, absque sutura transversa. Alæ oblongæ, incumbentes, apice rotundatæ, vena ambiente pubescente; margo posticus pilis fimbriatus; vena costalis circum marginem posticum attenuata; venæ apicales plusquam sex. Tibiæ nisi apice muticæ.

Ocelli none. Scutum of the mesonotum undivided. Wings and halteres developed. Wings oblong, rounded at the tip, incumbent; hind margin fringed with hairs; costal vein attenuated round the hind margin; veins in their last subdivisions more than six.

"This group is not proposed as a Natural Family, and therefore is not designated by a name conformable. Two genera of doubtful affinity are temporarily associated in it, by the artificial character above given, to avoid the multiplication of families, until their true respective places are better demonstrated. The first of these (*Orphnephila*) has indeed already been proposed by Rondani,* as the type of a distinct family, *Orphnephilinæ*, intercalated between the *Bibioninæ* and *Sciophilinæ*. Macquart, with confessed hesitation, has placed the genus among the *Fungicolæ* (= *Mycetophilidæ*), Zetterstedt among his *Rhyphii;* Haliday, the first describer,† referred it to the group *Culiciformes* (= *Culicidæ—Chironomidæ*), but expresses himself still unsatisfied as to its proper place, after examination of the internal anatomy. The metamorphosis, which would throw more light on the question, has not yet been

* Nuov. Ann. Sc. Nat. Bologna, ser. 2. tom. vii.

† Agassiz has given the dates, 1830 for *Orphnephila*, Hal., and 1832 for *Thaumalea*, Ruthé; but in fact *Orphnephila* was not published before the 1st of September, 1831, in the 19th number of the 'Zoological Journal'; while Ruthé's characters of *Thaumalea* appeared in the number of the 'Isis' for the November of the same year. As Wagler had employed the latter name, almost contemporaneously, for a genus of birds, the priority of the former is here recognized. But as the names date from the same year, and as Macquart at a later period casually chose the same trivial name as Ruthé's *testacea*, this has been retained in preference to the strictly prior name *devia*.

observed. The larva is probably to be looked for in running waters.

"The other genus *Dixa*, referred by Meigen and Zetterstedt to the *Mycetophilidæ*, by Macquart, Westwood and Loew to the *Tipulidæ*, and by Rondani to his *Trichocerinæ* (a subdivision of the latter group), differs from the first by the want of ocelli, from the latter by the undivided mesonotum, deep mesosternum, pectinated ungues of anterior legs, broad, rounded tentacles of the vagina, etc., and may be considered of dubious place, until the characters of the larva are known. Westwood (Mod. Class. ii. 527, *note*) and Haliday have indeed supposed that Degeer's figures, Mem. tom. vi. pl. 24. f. 1–11, are meant to represent a *Dixa* and its metamorphosis; but although the setaceous antennæ, slender legs, and conspicuous forked vein near the tip of the wing may suggest such a reference, the venation of the wing, as represented, is more like that in *Anisomera*. Roser's account (Wurt. Zweyfls.) of the metamorphosis of this last, however, does not agree with Degeer's of the insect in question; and the express character given of "hairy veins" scarcely leaves any alternative but to suppose it meant for an *Erioptera*."—*Hal.*

A. Antennæ shorter than the head. 1. ORPHNEPHILA.
B. Antennæ setaceous, shorter than the head. 2. DIXA.

Genus I. **ORPHNEPHILA.**

ORPHNEPHILA, Hal. Zool. Journ. v. no. xix (1831); Westw.; Rond. *Thaumalea*, Ruthé; Loew. *Chenesia*, Mcq.; Meig.; Zett.

Corpus parvum, oblongum, glabriculum. Caput parvum. Ocelli rotundi. Proboscis brevis. Palpi 4-articulati, elongati; articuli cylindrici, primus brevissimus; secundus crassior, ovatus; tertius et quartus paullo longiores. Antennæ filiformes, breves, basi crassæ. Thorax robustus, gibbus. Scutellum mediocre. Alæ nudæ, parallelæ, sat latæ, basi angustatæ, apice rotundatæ. Abdomen segmentis 7, subcylindricum, sat crassum, thorace paullo angustius et fere duplo longius. Pedes subæquales, mediocres, simplices, nudi, inermes; coxæ breves; ungues et onychia parva; *Mas*, oculi in fronte connexi. Anus magnus, valvatus.

Body oblong, rather small, nearly smooth. Eyes round, large, meeting on the front, but not on the under side. Proboscis short, with oblong labella. Labrum still shorter, stout, conical; the lateral edges sinuated or toothed; the tongue concealed. Palpi more that twice as long as the antennæ, five-jointed; first joint shortest; second thickest, ovate; the others gradually more slender; the fifth not elongated. Antennæ near the mouth, shorter than the head, seeming composed of

two joints (first globose; second ovate, with a terminal arista, which is a little longer than the first and second together), but under a good lens they are found to be ten-jointed; the first thickest, globose; second, third, and fourth compact into an oval mass; the rest slender; fifth short; sixth and following, to the tenth, linear, pubescent; tenth with two longer hairs near the tip. Thorax robust, gibbous; scutellum of moderate size. Wings oblong, with an obtuse anal angle; no distinct axillary lobe; the ambient vein faint round the hind margin; of the longitudinal veins two end in the costa, two about the apex, three in the hind margin; there is an areolet closed before the middle of the wing, with very irregular outward limit; it is divided longitudinally by an obsolete vein (the first part of the præbrachial vein), and represents the confluent brachial areolets (nearly as in *Bolitophila*). Taking the mediastinal vein to be obsolete, and the first longitudinal vein ending before the middle of the costa to be the subcostal, we shall have a simple radial ending beyond the middle of the costa, and a simple cubital ending near the apex of the wing, these two connected by a perpendicular veinlet beyond the end of the præbrachial areolet; three simple externo-medial veins, two from the end of the præbrachial, one from the pobrachial areolet; subanal vein produced from the posterior apical angle of this last areolet, running to the margin not far beyond the anal angle; anal and axillary veins very faint or obsolete; præbrachial areolet longer than the pobrachial, but almost confounded with it. Halteres elongated; club rather large. Abdomen with seven segments, nearly cylindrical, moderately thick, a little narrower than the thorax, and about twice its length. Legs simple, bare, unarmed, of moderate and nearly equal length; coxæ short; tibiæ without spines; tarsi rather long, the foremost much longer than the tibia; penultimate joint shortest, emarginate at the tip, nearly obcordate. Ungues curved, simple, acute. Onychia dilated. Empodium inconspicuous. *Male.* With a double forceps, the outer very stout, two-jointed; first joint broad, subovate; second slender, culthiform, acute; inner forceps slender, strongly incurved, armed at the tip with an inflected claw, and with a smaller spine inside, some way before the tip. *Fem.* Tentacles of the vagina broad, rounded at the tip.

1. **testacea,** Ruthé, Isis, 1831. 1211 (1831); Loew; Mcq.; Meig.; Zett.—*devia*, Hal.—*obscura*, Zett. Picea, palpis antennisque nigris, alis cinereis, pedibus testaceis. Long. $1\frac{1}{3}$; alar. 4 lin.

Piceous. Palpi and antennæ black. Wings grey; veins black. Halteres and legs testaceous.

Not common; frequents the shady banks of streams. (E. I.) "Connor hill, near Dingle, almost one thousand feet high; not seen higher."—*Hal. MSS.*

Genus II. **DIXA.**

Dixa, Meig. Zw. i. 216 (1818); Mcq.; Curt.; Westw.; Stæg.; Ros. (V.); Zett.; Loew.

Corpus elongatum, nudum, sat parvum. Caput parvum, rotundatum, sessile; frons lata. Oculi rotundi, remoti. Proboscis brevis. Palpi 4-articulati, exserti, incurvi, cylindrici; articulus primus brevissimus; quartus tertio paullo longior. Antennæ 14-articulatæ?, porrectæ, setiformes, vix pubescentes, thorace longiores; articuli primus et secundus breves, incrassati. Thorax ovatus, convexus. Scutellum transversum. Metathorax breviusculus. Alæ sat latæ, incumbentes, nudæ. Abdomen angustum, segmentis septem. Pedes longiusculi, gracillimi, nudi, inermes; coxæ breves, crassiusculæ; tibiæ vix calcaratæ, posticæ apice subincrassatæ. *Mas.* Abdomen forcipe anali brevi incurva. *Fœm.* Abdomen stylis duobus analibus parvis contiguis.

Body elongated, dull, bare, rather small, generally blackish. Head small, rounded, sessile, lower than the thorax. Front broad. Eyes round, remote. Mouth not lengthened. Palpi four-jointed, exserted, curved downward, cylindrical; first joint very short; fourth a little longer than the third. Antennæ fourteen-jointed?, porrect, setiform, very minutely pubescent, a little longer than the head and the thorax; first and second joints short, incrassated. Thorax oval, generally yellow, with dark stripes, convex above, almost gibbous in front, without a transverse suture. Scutellum transverse. Metathorax rather short. Wings moderately broad, incumbent, bare; mediastinal vein ending at half the length of the wing; subcostal ending at just in front of the tip; radial and cubital springing from a short common petiole, which proceeds from the subcostal at half the length; radial forked before half its length; cubital connected at its base by a transverse veinlet with the externo-medial; the latter is forked near its tip, and is connected with the subanal by a transverse veinlet, the middle of which emits the second externo-medial; subanal and anal complete; axillary incomplete, very short; no discal areolet. Abdomen narrow, with seven segments. Legs elongated, very slender, bare, unarmed; coxæ rather thick, not elongated; tibiæ hardly armed with spurs, the hind pair slightly incrassated at the tips. *Male.* Abdomen with a short, incurved anal forceps. *Fem.* Abdomen with two short contiguous anal styles.

The larvæ probably inhabit fungi or decayed wood. The flies generally appear in the evening, and are found in meadows and woods.

a. Wings unspotted. Species 1, 2.
a a. Wings spotted. Species 3, 4.

1. **æstivalis,** Meig. Zw. i. 218. 2 (1818); Mcq.; Gim. *Testacea, thorace vittis quatuor ferrugineis,* alis limpidis, abdomine supra fusco,

segmentorum marginibus posticis testaceis, tibiis posticis apice tarsisque nigricantibus. Long. 2–2½; alar. 5–6 lin.

Testaceous. Palpi and antennæ black, the latter testaceous at the base. *Thorax with four ferruginous stripes,* the lateral pair short. Wings limpid. Halteres brownish at the tips. Abdomen brown above; hind borders of the segments testaceous. Tarsi and tips of the hind tibiæ blackish.

Not rare. (E. I.)

2. **aprilina,** Meig. Zw. i. 218. 3. pl. 7. f. 12 (1818); Mcq.; Ros. (V.); Zett.—*maculata* var., Stæg.—Var. *cincta,* Curt.—Var. *fuliginosa,* Walk. *Nigra, thoracis lateribus strigisque duabus dorsalibus testaceis,* alis limpidis, pedibus testaceis, tarsis nigricantibus. Var. β. Thorace piceo. Long. 1½–2; alar. 4–5 lin.

Black. Thorax testaceous along each side, and with two testaceous dorsal streaks. Wings limpid. Halteres testaceous, with brown knobs. Legs testaceous; tarsi blackish.—Var. β. Scutellum pale dingy yellow. —Var. γ. Thorax piceous. Wings slightly greyish. Legs piceous; hind femora testaceous.

Not rare. (E. I.)

3. **maculata,** Meig. Zw. i. 219. 4 (1818); Mcq.; Gim.; Loew; Stæg.; Ros. (V.); Zett.—*serotina?* Hoffm.; Meig.—*mœsta,* Hal. Curt. B. E. 409. Nigra, thorace vittis tribus testaceis, *alis sublimpidis, striga maculaque fuscis,* pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 1¼–2½; alar. 3–6 lin.

Black. Palpi testaceous. Thorax with three testaceous stripes, the middle one very slender, the dorsal pair broad, forked hindward. *Wings nearly limpid, clouded with brown at the base of the radial and cubital veins and on the subanal vein;* these marks are occasionally almost obsolete in the small individuals. Halteres testaceous. Legs testaceous; tarsi black, except towards the base; tips of the femora and of the tibiæ black.

Not uncommon. (E. I.)

4. **nebulosa,** Meig. Zw. vi. 293. 5 (1830); Curt.! B. E. 409; Zett.; Gim.; Guér.; Stæg.; Ros. (V.); Zett.—*nubilipennis,* Curt. Nigra, thorace vittis tribus testaceis, *alis limpidis cinereo-nebulosis maculaque fusca,* pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 1¾–2; alar. 4½–5 lin.

Black. Palpi testaceous. Thorax with three testaceous stripes, the middle one very slender, the lateral pair very broad. *Wings limpid, mottled with grey, and with a brown spot at the base of the radial and cubital veins.* Halteres testaceous. Legs testaceous; tarsi blackish; tips of the femora and of the tibiæ black.

Not uncommon. (E. I.)

Family X. TIPULIDÆ.

Tipulidæ, Hal. I. B. D. i. 7 (1851). *Tipulariæ Terricolæ* p., Latr.; Mcq. *Tipulariæ rostratæ* p., Meig.

Mesothoracis scutum sutura transversa angulosa.

Scutum of the mesonotum with an angular transverse seam.

The species of this Family are called Crane-flies, or Daddy Long-legs, and are at once distinguished by the length of their legs. The larvæ feed on roots, fungi, wood, and decaying vegetable substances, and in a few cases are aquatic.

The flies much exceed all the other *Nemocera* in size and in variety of structure, and very many of the exotic genera are quite distinct from the European forms. The genus *Chionea* is not only remarkable in being wingless, but also from its occurring only on snow in winter, and most often on new-fallen snow. The head is generally more or less prolonged in front. The fourth joint of the palpi in some genera is long, flexible, and as it were jointed. The antennæ are filiform or setaceous, occasionally verticillate-pilose or pectinated, sometimes of great length in the male. The transverse suture of the mesothorax is peculiar to the Family, and the metathorax is often elongated. The wings are long and narrow, and generally contain a discal areolet. The abdomen and the legs are very long and slender, and the female has a horny pointed oviduct. The peculiar structure of the Family has most development in the genus *Tipula*.

Mr. Haliday has kindly contributed the synopsis of the genera of *Tipulidæ*, and I am also indebted to him for some of the following notes. I have reunited to *Limnobia* the genera which have been separated from it; for in some cases nearly allied species have been placed in different genera, and *Limnobia*, without them, would still comprise several equivalent or more distinct groups than those which have been removed from it; the synopsis is accordingly altered so as to indicate those genera without adopting them. *Erioptera lateralis*, Mcq., is included in *Limnobia*, as it appears to be most nearly allied to that genus, though its middle legs are a little shorter than the others.

- Wingless . . . . . CHIONEA.*
- Winged: Anal vein
  - distinct: Axillary vein
    - obsolete, a fold in place of it . . . . . 17. PTYCHOPTERA.
    - Extending much beyond the anal angle: Externo-medial veins that spring from the brachial areolets
      - very short, incurved to the anal angle . . . . . 1. TRICHOCERA.
      - two
        - simple, detached . . . . . 2. ANISOMERA.
        - multiplied before the end: Palpi
          - very short, rigid . . . . . 9. GERANOMYIA.
          - flexible, usually four-jointed: Rostrum
            - longer than the rest of the head . . 8. RHAMPHIDIA.
            - shorter than the rest of the head: Antennæ
              - 12-jointed . . . . . 13. DOLICHOPEZA.
              - 13-jointed . . . . . 6. DICRANOTA.
              - 14-jointed .
                - remote moniliform, bipectinate in the male . . } 10. RHIPIDIA.
                - compact moniliform, unbranched in the male and in the female . . . } 5. LIMNOBIA. (Glochina, *Meig.*)
              - 16- (or 15-?) jointed: Cubital vein
                - simple: Externo-medial veins ending in
                - three: Axillary vein
                - sinuous . . . 4. SYMPLECTA.
                - nearly straight: Middle legs
                - shorter than the others . . } 3. ERIOPTERA.
                - not shorter than the others . . } 5. LIMNOBIA. (Vera.)
                - four: Pobrachial areolet
                - bisected 5. LIMNOBIA. (Idioptera, *Mcq.*)
                - entire . 5. LIMNOBIA. (Limnophila, *Mcq.*)
                - forked; Discal areolet
                - one . 12. PEDICIA.
                - none 5. LIMNOBIA. (Tricyphona, *Zett.*)
    - three (with an additional one from the discal areolet): Antennæ . . .
      - 17-jointed: Externo-medial veins ending in
        - four . 11. CYLINDROTOMA.
        - three . 7. ULA.
      - of more than 13 joints . . . 14. NEPHROTOMA.
      - 13-jointed
        - unbranched in the male and the female 15. TIPULA.
        - pectinated in the male . . . . . 16. CTENOPHORA.

* Not British, as far as known.

Genus I. **TRICHOCERA.**

TRICHOCERA, Meig. Zw. i. 211 (1818); Mcq.; Westw.; Curt.; Zett.; Gim.; Stæg.; Ross. (V.) *Tipula* p., L.; D. G.; Geoff.; F.; Schr.; Gmel. *Limonia* p., Latr.

Corpus elongatum, fere nudum, mediocre aut parvum. Caput parvum, rotundatum; frons lata. Oculi rotundi, remoti. Proboscis brevis. Palpi 4-articulati, exserti, cylindrici, incurvi; articuli secundus et tertius æquales; primus brevior; quartus longior, apud medium inflexus. Antennæ 14-articulatæ?, porrectæ, setiformes, thorace longiores; articuli primus et secundus validi, breviusculi; primus cylindricus; secundus cyathiformis; tertius et sequentes oblongi, vix pubescentes. Prothorax brevis. Thorax valde convexus. Scutellum parvum. Alæ sat latæ, incumbentes, nudæ; stigma nullum. Abdomen gracile, sublineare, segmentis octo. Pedes longiusculi, graciles, nudi, inermes; coxæ breves; tibiæ vix calcaratæ. *Mas.* Abdomen apice obtusum, forcipe brevi. *Fœm.* Abdomen stylis duabus analibus arcuatis divergentibus.

Body elongated, dull, nearly bare, of moderate or rather small size, generally cinereous or brown. Head small, rounded, not sessile, lower than the thorax. Front broad. Eyes round, remote. Proboscis short. Palpi four-jointed, exserted, curved downward, cylindrical; second and third joints a little longer than the first; fourth still longer, bent in the middle, so as apparently to consist of two joints. Antennæ fourteen-jointed?, porrect, setiform, a little longer than the head and the thorax; first and second joints rather short and stout; first cylindrical; second cyathiform; third and following joints oblong, very minutely pubescent. Prothorax short. Thorax very convex, almost gibbous in front, with an angular transverse suture. Scutellum small. Metathorax semicircular, slightly depressed. Wings rather broad, incumbent, bare; stigma obsolete; mediastinal vein ending at four-fifths of the length of the wing; subcostal ending at hardly in front of the tip; radial and cubital springing from a common petiole, which proceeds from the subcostal at two-fifths of the length; radial forked before one-third of its length; its fore fork connected by a short transverse veinlet with the subcostal; cubital connected close to its base by a transverse veinlet with the first externo-medial; first and third externo-medial veins springing from a common petiole at a little before two-thirds of the length; first externo-medial forked at hardly beyond half its length, connected again with the third externo-medial by a veinlet whose angle emits the second externo-medial; subanal forming towards its tip an angle, and there connected by a veinlet with the third externo-medial; anal and axillary veins complete, the latter very short; discal areolet pentagonal. Halteres very long. Abdomen with eight segments, slender, nearly linear, slightly depressed, minutely pubescent. Legs elongated, slender, bare, unarmed; coxæ not elongated; tibiæ hardly armed with apical spurs.

Male. Abdomen obtuse at the tip, with rather short forceps. *Fem.* Abdomen with two short curved divergent anal styles.

The larvæ live in fungi, decayed wood, and decaying vegetables, such as potatoes, turnips, and carrots. The body is cylindrical. The head is oval, with two very short lateral lobes; the tip of the abdomen is much acuminated, and has three small conical points. The flies are very numerous, and their habits are indicated by the names of two of the species, for they live through the winter, and resume their ascending and descending flight whenever a thaw occurs. The species may be grouped thus:—

a. Fork of the first externo-medial vein short. Species 1.
a a. Fork of the first externo-medial vein long.
b. Transverse veinlets of the wings not clouded. Species 2.
b b. Transverse veinlets clouded with brown. Species 3.

1. **fuscata,** Meg.; Meig. Zw. i. 212. 1 (1818); Mcq.; Gim.; Stæg.; Zett.—*annulata?* Meg.; Meig.; Mcq.; Stæg.; Perris; Zett. *Lurida, thorace vitta cinerea, alis* sublimpidis, *venæ externo-medialis primæ furca brevi, abdomine fasciis subcinereis,* tarsis fuscescentibus. Long. $2\frac{1}{2}$–3; alar. 6–7 lin.

Lurid. Antennæ blackish. *Thorax with a grey stripe. Wings* nearly limpid; *fork of the first externo-medial vein short.* Halteres testaceous, with piceous knobs. *Hind borders of the abdominal segments greyish.* Tarsi brownish.

Generally distributed. (E. S. I.)

2. **hiemalis,** D. G. Ins. vi. 360. 13 (1752); Latr.; Lam.; Meig.; Mcq.; Zett.; Gim.; Curt.; Stæg.; Ross. (V.)—*parva,* Meig.; Mcq.; Zett.; Gim.; Stæg.; Ross. (V.) *Nigra, alis* sublimpidis, *venæ externo-medialis primæ furca longa, abdomine pedibusque piceis,* tarsis nigris. Long. 3–$3\frac{1}{2}$; alar. 7–8 lin.

Black. Wings nearly limpid; *fork of the first externo-medial vein long.* Halteres testaceous, with piceous knobs. *Abdomen piceous. Legs piceous;* tarsi black.

Generally distributed. (E. S. I.) Appears during the winter when the weather is mild, and is gregarious in the air, and then its movements are vertical, like those of many other *Tipulidæ.*

3. **regelationis,** L. S. N. 2. 972. 21 (1763); F.; Schr.; Gmel.; Meig.; Mcq.; Zett.; Gim.; Stæg. *Lurida, vertice thoracisque disco fuscis, alis* sublimpidis, *venæ externo-medialis primæ furca longa, venulis transversis fusco-nubilis,* tarsis fuscescentibus. Long. 3–4; alar. 7–9 lin.

Dull lurid. Vertex and disc of the thorax brown. Wings nearly limpid; *transverse veinlets slightly clouded with brown; fork of the first externo-medial vein long.* Halteres pale testaceous, with piceous knobs. Legs pale lurid; tarsi brownish.

Generally distributed. (E. S. I.)

Genus II. **ANISOMERA.**

ANISOMERA, Hoffm. Meig. Zw. i. 210 (1818); Meq.; Zett. *Hexatoma*, Latr.; Lam. *Perenocera*, Curt.

Corpus elongatum, medioere, sublæve. Caput rotundum, sessile; frons latissima. Oculi parvi, oblongi, remoti. Proboscis brevis. Palpi 4-articulati, exserti, incurvi; articuli æquales. Antennæ 6-articulatæ, porrectæ, subfiliformes; articulus primus cylindricus; secundus cyathiformis; tertius et sequentes setacei, subpubescentes, hic longus. Prothorax brevissimus. Thorax sat convexus. Scutellum medioere. Metathorax brevis. Alæ incumbentes, medioeriter latæ. Abdomen elongatum, segmentis octo. Pedes longiusculi, sat graciles, inermes, fere nudi; coxæ breves; tibiæ posteriores calcaribus brevissimis. *Mas.* Antennæ longiores. Abdomen apice obtusum, forcipe brevi. *Fœm.* Antennæ breviores. Abdomen stylis analibus rectis parvis.

Body elongated, dull, nearly smooth, of moderate size. Head round, sessile; front very broad. Eyes small, oblong, remote. Proboscis short. Palpi four-jointed, exserted, curved downward; joints of equal size. Antennæ six-jointed, porrect, subfiliform; first joint cylindrical; second cyathiform; the following joints setaceous, minutely pubescent, the third long. Thorax moderately convex. Prothorax very short. Scutellum of middle size. Metathorax short. Wings incumbent, long, lanceolate, rather narrow; mediastinal vein ending at a little before or beyond two-thirds of the length of the wing. Subcostal ending at four-fifths or five-sixths of the length, connected with the radial by a transverse veinlet from the angle close to its tip; radial and cubital springing from a common petiole, which nearly or quite equals them in length, and proceeds from the subcostal at more or less before half the length of the wing, and forms an angle close to its base; cubital connected at one-fourth of its length with the externo-medial by a transverse veinlet, the middle of which emits another externo-medial, and in a line with it there is a veinlet between the externo-medial and the subanal, where the latter forms an angle to the hind border; anal and axillary complete; no discal areolet. Halteres of moderate length. Abdomen elongated, with eight segments. Legs moderately long and slender, nearly bare, unarmed; coxæ short; posterior tibiæ with very short spurs. *Male.* Antennæ longer. Abdomen obtuse at the tip, with a short forceps. *Fem. Antennæ* shorter. Abdomen with straight short anal styles.

Inhabits the banks of rivers. The larva lives in mud.

a. Antennæ of the male as long as the body; of the female half the length of the thorax. Species 1.

a a. Antennæ of the male hardly more than half the length of the thorax; of the female less than half the length of the thorax. Species 2.

1. **nigra,** Latr. Gen. Curt. iv. 260 (1809); Lam.; Meq. Nigra,

alis cinereis, pedibus ferrugineis, femoribus tibiisque apice tarsisque piceis. Long. 4–5; alar. 11–12 lin.

Black. Wings grey; mediastinal vein ending at a little beyond two-thirds of the length of the wing; subcostal ending at five-sixths of the length; radial and cubital veins as long as their common petiole, which proceeds from the subcostal at a little before half the length of the wing; radial forked before half its length; its fore fork connected by a veinlet close to the base with the subcostal. Halteres piceous. Legs dull ferruginous; tarsi and tips of the femora and of the tibiæ piceous.

Inhabits the banks of streams among the hills, and occurs most frequently in the north of England and in Scotland. Rare. (E. S.)

2. **vittata,** Meig. Zw. vi. 292. 4 (1830); Gim.; Zett.—*fuscipennis*, Curt. Nigro-cinerea, thorace vittis duabus canis, alis subcinereis, venis infuscatis, pedibus piceis. Long. 3–3½; alar. 7–8 lin.

Cinereous-black, dull. Thorax with two hoary stripes which are forked hindward. Wings greyish; veins black, slightly clouded; mediastinal vein ending at a little before two-thirds of the length of the wing; subcostal ending at four-fifths of the length; radial and cubital veins rather longer than their common petiole, which proceeds from the subcostal at before half the length of the wing; radial forked at some distance beyond its junction with the subcostal, its fore fork very short. Halteres testaceous. Abdomen pilose on each side. Legs piceous.

Not rare in the north of England, and in Scotland. (E. S.)

Genus III. **ERIOPTERA.**

ERIOPTERA, Meig. Klass. Zw. (1804); F.; Mcq.; Curt.; Westw.; Stæg.; Zett.; Ros. (V.) *Tipula* p., L.; F.; Geoff.; Gmel. *Limonia* p., Latr.

Corpus gracile, elongatum, subpubescens, mediocre aut parvum. Caput parvum, globosum. Oculi rotundi, remoti. Proboscis brevis. Palpi 4-articulati, cylindrici, incurvi, pubescentes; articuli subæquales. Antennæ 16-articulatæ, porrectæ, simplices, subpilosæ, filiformes aut fere setiformes; articulus primus cylindricus; secundus cyathiformis; tertius et sequentes parvi, ovati. Alæ incumbentes, parallelæ, sat longæ, latitudine mediocres. Abdomen cylindricum aut fusiforme, segmentis octo, subpubescens. Pedes longi, graciles, inermes, tibiæ subpubescentes; tibiæ ecalcaratæ. *Mas.* Abdomen apice obtusum. *Fem.* Abdomen stylis duobus apicalibus corneis.

Body of moderate or small size, slender, elongated, slightly pubescent, pale, or cinereous. Head small, globose. Eyes round, remote. Proboscis not elongated. Palpi four-jointed, exserted, cylindrical, pu-

bescent, curved downward; joints of nearly equal length. Antennæ sixteen-jointed, porrect, simple, somewhat hairy, filiform, or nearly setiform; first joint cylindrical; second cyathiform; the rest small and oval. Thorax with a sinuated transverse suture. Wings incumbent, parallel, rather long, of moderate breadth, very generally pubescent; mediastinal vein joining the costa at two-thirds of the length; subcostal ending at rather beyond three-fourths of the length; radial and cubital springing from a common petiole, which proceeds from the subcostal before one-third of the length of the wing, exceeds them in length, and is connected at its fork with the subcostal by a transverse veinlet; first externo-medial proceeding from the above petiole near its fork, connected at an angle near its base with the third externo-medial by a transverse veinlet; the latter also forms an angle, whence proceeds the second externo-medial, which is forked at about two-thirds of its length; another veinlet, opposite the above-mentioned, connects the third externo-medial with the subanal. Halteres elongated. Abdomen with eight segments, minutely pubescent, nearly cylindrical or nearly fusiform. Legs long, slender, somewhat pubescent, unarmed; the middle pair somewhat shorter than the others; tibiæ without spurs. *Male.* Tip of the abdomen obtuse. *Fem.* Abdomen with two horny styles at the tip.

The larvæ live under the earth, and the flies inhabit shrubs and woods, meadows, marshy places, and heaths.

a. Wings with a discal areolet.
  b. Wings spotted. Species 1.
  b b. Wings not spotted. Species 2, 3.
a a. Wings with no discal areolet.
  b. Transverse veinlets in the disc of the wing nearly equally distant from the base.
    c. Body yellow. Species 4, 5.
    c c. Body grey or brown.
      d. Antennæ short.
        e. Stigma very distinct. Species 6.
        e e. Stigma indistinct. Species 7, 8.
        e e e. Stigma none.
          f. Thorax pale on each side. Species 9, 10.
          f f. Thorax not pale on each side. Species 11.
      d d. Antennæ rather long. Species 12.
  b b. Hind transverse veinlet in the disc nearer to the base of the wing than the fore one.
    c. Body yellow. Species 13.
    c c. Body dark.
      d. Wings moderately long. Species 14, 15.
      d d. Wings shorter than the abdomen. — *Molophilus*, Curt. Species 16.

1. **maculata,** Meig. Zw. i. 108. 1 (1818); Meq.; Stæg.; Ros.; Zett. Cana, palpis nigris, antennis pedibusque testaceis, alis halteri-

busque albidis, illis cinereo-ocellatis, abdomine nigricante, femoribus nigro-cinctis. Long. $3\frac{1}{2}$–4; alar. 7–8 lin.

Hoary. Palpi black. Antennæ testaceous. Wings whitish, with numerous grey ocelli. Halteres whitish. Abdomen blackish. Legs testaceous; femora with a black subapical band; fore femora with a black band before the middle.

Not rare. (E. S. I.)

2. **cinerascens,** Meig. Zw. i. 114. 15 (1818); Mcq.; Zett.; Gim.; Stæg.?; Ros. *Cinerascens*, palpis antennisque nigris, thorace vittis duabus testaceis, pectore et metathorace canis, alis sublimpidis, halteribus testaceis, abdominis apice fulvo, pedibus fulvis, femoribus tibiis tarsisque apice fuscescentibus. Long. 3; alar. 7 lin.

Greyish. Palpi and antennæ black. Thorax with a testaceous line on each side. Pectus and metathorax hoary. Wings nearly limpid; no stigma; veins black, tawny at the base, not pilose. Halteres testaceous. Abdomen tawny at the tip. Legs dull tawny; tarsi towards the tips, and tips of the femora and of the tibiæ, brownish.

Not common. (E.)

3. **imbuta,** Meig. Zw. i. 114. 14 (1818); Stæg.; Ros. (V.); Zett. *Testacea*, gracilis, antennis apice nigris, alis limpidis, venis albidis apice pilosis. Long. $2\frac{1}{2}$; alar. 6 lin.

Testaceous, slender. Antennæ black towards the tips. Wings limpid; veins whitish, hairy towards the tips; no stigma. Legs pale testaceous.—Meigen and Zetterstedt mention the brown tips of the femora and of the tibiæ as characters of *E. imbuta;* in the specimen here described they are wholly pale.

Rare. (E.)

4. **flavescens,** L. Fn. Suec. 1753? (1761); F.; Gmel.; Lam.; Meig.; Gim.; Zett.; Stæg.; Ros.—*lutea*, Gmel. Var. *lutea*, Zett. I. L. Var. *divisa*, Walk. Flava aut pallide lutea, *antennis apice fuscis, alis ad costam flavescentibus* venis ciliatis pallide flavis, abdomine piloso nonnunquam vitta dorsali, *pedibus testaceis* pubescentibus. Long. $2\frac{1}{2}$–$3\frac{1}{2}$; alar. 6–8 lin.

Pale luteous or yellow. *Antennæ brown towards the tips. Wings yellowish in front;* veins pale yellow, mostly ciliated. Abdomen pilose, with a sometimes obsolete dorsal stripe. *Legs testaceous*, pubescent.

Not rare. (E.)

5. **lutea,** Meig. Zw. i. 110. 3 (1818); Mcq.; Gim.; Stæg.; Zett. Lutea, *palpis antennisque nigris, alis subcinereis, abdomine fasciis albido-testaceis*, pedibus sat validis subpubescentibus, femoribus tibiisque apice fuscescentibus. Long. $2\frac{1}{2}$; alar. 6 lin.

Luteous. *Palpi and antennæ black. Wings slightly greyish; veins pale, thickly fringed with pale hairs; borders ciliated. Abdomen with a whitish-testaceous band on the hind border of each segment.* Legs rather

stout, very minutely pubescent; tips of the femora and of the tibiæ brownish; tarsi brown.

Not rare. (E.)

6. **lineata,** Meig. Zw. i. 111. 7 (1818); Mcq.; Gim.; Stæg.; Ros.; Zett.—Var. *apparens*, Walk. Cinerea, palpis antennisque nigris, *alis subcinereis, venis nigris, stigmate fusco*, halteribus albidis aut testaceis, pedibus nigris, femoribus tibiisque plus minusve testaceis apice nigris.

Cinereous. Palpi and antennæ black. *Wings grey; veins black, testaceous at the base; stigma brown.* Halteres whitish. Legs black; femora dingy testaceous, blackish towards the tips. Var. β. Pectus whitish. Halteres testaceous. Legs testaceous; tarsi and tips of the femora and of the tibiæ blackish.

Generally distributed. (E. S. I.)

7. **grisea,** Meig. Zw. i. 112. 9 (1818); Mcq.; Stæg.; Zett. Cinerea, antennis fuscis basi fulvis, *thorace vittis duabus flavescentibus, alis subcinereis, venis* fuscis *pubescentibus*, halteribus albidis, abdominis apice pedibusque fulvis, his sat validis, femoribus tibiisque apice tarsisque fuscis.

Grey. Antennæ brown, tawny at the base. Thorax with a yellowish streak on each side. Wings greyish; veins brown, pubescent. Halteres whitish. Tip of the abdomen tawny. Legs tawny, rather short and stout; tarsi and tips of the femora and of the tibiæ brown.

Not common. (E.)

8. **diuturna,** Walk. C. D. B. M. i. 54 (1848).—*hæmorrhoidalis?*, Zett. Cinerea, antennis nigris, thoracis lateribus pectoreque fulvis, *alis subfuscis, venis non pubescentibus; Mas*, pedibus fuscis, tibiis fulvis apice fuscis; *Fœm.* pedibus fulvis, femoribus tibiisque apice tarsisque fuscis. Long. 2; alar. 5 lin.

Grey. Antennæ black, tawny at the base, shorter than the thorax. Sides of the thorax and pectus tawny. *Wings slightly tinged with brown; stigma pale brown;* veins and halteres brown. *Male.* Legs brown; tibiæ dark tawny with brown tips. *Fem.* Legs tawny; tarsi and tips of the femora and of the tibiæ brown.

Not common. In the British Museum. (E.)

9. **trivialis,** Meig. Zw. i. 112. 8 (1818); Mcq.; Stæg.?; Ros.; Zett. Cana, palpis antennisque nigris, thorace vittis duabus testaceis, *alis subcinerascentibus, venis pallide fuscis apice ciliatis, stigmate fusco*, halteribus albis, abdomine fusco, pedibus testaceis, femoribus tibiis tarsisque apice fuscescentibus. Long. 3; alar. 7 lin.

Hoary. Palpi and antennæ black. Thorax with a slender testaceous stripe along each side. *Wings very slightly greyish; veins pale brown, fringed towards the tips; stigma pale brown.* Halteres white. Abdomen brown, with a slight hoary tinge. Legs dull testaceous, moderately long and slender; tips of the femora, of the tibiæ, and of

the tarsi brownish. *Fem.* Tip of the abdomen testaceous. Var. β. Thorax testaceous, with a black stripe. Wing-veins and halteres testaceous.

Generally distributed. (E. S. I.)

10. **tænionota,** Meig. Zw. i. 111. 5 (1818); Mcq.; Gim.; Stæg.; Zett. D. S.—*analis,* Zett. I. L. Fulva, nonnunquam cana aut cinerea, palpis antennisque nigris, *alis subcinerascentibus,* abdomine nonnunquam fuscescente, pedibus testaceis, femoribus tibiis tarsisque apice plus minusve fuscis aut nigris. Long. 3; alar. 7 lin.

Tawny. Palpi and antennæ black. Thorax with a slight, short black stripe in front; sides of the thorax, pectus, and metathorax whitish-testaceous. *Wings hardly greyish; veins brown, fringed with pale hairs towards the tips.* Halteres whitish, with brown knobs. Abdomen pale brown, tawny beneath. Legs dull testaceous, rather long and slender; tarsi with black tips.—Var. β. Hoary. Head, palpi, and antennæ black. Thorax with two slender brownish stripes. Veins of the wings black, testaceous at the base. Halteres whitish. Tarsi and tips of the femora and of the tibiæ brown.—Var. γ. Thorax hoary, tawny about the base of the antennæ. Halteres whitish. Legs brown. —Var. δ. Hoary. Disc of the thorax cinereous. Wing-veins and halteres pale testaceous. Abdomen blackish-grey, testaceous at the tip. Tips of the tibiæ and of the tarsi brown.—Var. ε. Whitish. Wing-veins pale. Halteres white. Abdomen cinereous. Tips of the femora, of the tibiæ, and of the tarsi black.

Generally distributed. (E. S. I.)

11. **fuscipennis,** Meig. Zw. i. 111. 6 (1818); Mcq.; Gim.; Stæg.; Zett. Cinerea aut ferruginea, palpis antennisque nigris, *alis subcinereis, venis fuscis ciliatis,* halteribus pallide testaceis, abdomine fusco, pedibus testaceis sat validis, femoribus tibiis tarsisque apice fuscescentibus. Long. 3; alar. 7 lin.

Cinereous or dull ferruginous. Palpi and antennæ black. *Wings slightly greyish; veins brown, thickly fringed with brownish hairs;* borders ciliated. Halteres pale testaceous. Abdomen brown. Legs dull testaceous, rather stout; tips of the femora, of the tibiæ, and of the tarsi, brownish. *Fem.* Tip of the abdomen testaceous.

Not rare. (E.)

12. **nodulosa,** Mcq. D. N. i. 108. 5 (1827); Meig.—*Hederæ,* Curt. Cinerea, capite pectoreque albidis, palpis *antennis*que nigris, *his longiusculis, alis subcinereis, venis nigris, stigmate fusco,* halteribus albis, abdomine cinereo, pedibus fuscis, femoribus basi fulvis, tarsis apice nigris.

Cinereous. Head and pectus whitish. Palpi and *antennæ* black, *the latter rather long. Wings grey; veins black; stigma brown.* Halteres white. Abdomen cinereous. Legs brown; femora tawny towards the base; tarsi black at the tips.

Not common. (E.)

13. **ochracea,** Meig. Zw. i. 114. 13 (1818); Mcq.; Stæg.; Ros. —*crassipes*, Curt. Ochracea, palpis antennisque nigris, his basi pectore et metathorace testaceis, alis limpidis, venis albidis pilosis, pedibus testaceis, femoribus tibiisque apice tarsisque fuscis.

Ochraceous. Palpi and antennæ black, the latter testaceous towards the base. Pectus and metathorax testaceous. Wings limpid; veins and halteres whitish, the former pilose. Legs testaceous; tarsi and tips of the femora and of the tibiæ brown.

Not rare. (E.)

14. **obscura,** Meig. Zw. i. 113. 12 (1818); Mcq.; Ros.; Zett. *Nigra*, obscura, alis nigricantibus, *halteribus testaceis, pedibus piceis.* Long. $1\frac{1}{2}$–$1\frac{3}{4}$; alar. $3\frac{1}{2}$–4 lin.

Black, dull. Palpi and antennæ black. Wings blackish, thickly clothed with hairs; veins black; stigma obsolete. *Halteres testaceous. Legs piceous.*

Not common. (E.)

15. **murina,** Meig. Zw. i. 113. 11 (1818); Stæg.; Zett.—*pygmæa*, Mcq. *Nigro-cinerea*, obscura, antennis *halteribus pedibusque nigricantibus*, alis cinereis densissime nigro-pilosis. Long. $1\frac{1}{4}$–$1\frac{1}{2}$; alar. $2\frac{1}{2}$–3 lin.

Greyish-black, dull. Antennæ, *halteres, and legs blackish.* Wings grey, most thickly covered with black hairs.

Inhabits damp woods. (E.)

16. **atra,** Meig. Kl. i. 50. 1 (1804); Latr.; Zett.; Mcq.; Gim. —*erioptera*, F.—*brevipennis*, Curt.! B. E. 444. Atra, alis nigricantibus brevissimis, halteribus albis, pedibus validis. Long. 1; alar. $1\frac{1}{4}$ lin.

Deep black. Wings blackish, very short, not used for flight. Halteres white. Legs black, stout.

Inhabits moors and mountains, and occurs chiefly in the north. (E. S. I.)

Genus IV. **SYMPLECTA.**

SYMPLECTA, Meig. Zw. vi. 283 (1830); Mcq.; Zett.; Gim.; Stæg.; Ros. (V.) *Limnobia* p., Meig. Zw. i.; Schumm. *Helobia*, St. Farg.

Corpus minoris magnitudinis, elongatum, angustum, glabriculum. Caput parvum. Oculi supra conniventes, subtus subconnati. Proboscis brevis. Palpi 4-articulati, incurvi; articulus primus brevissimus; secundus et sequentes subæquales. Antennæ 16-articulatæ, filiformes, pilosulæ, thorace nonnihil breviores; articulus primus cylindricus; secundus cyathiformis; tertius et sequentes globosi. Prothorax brevis. Thorax ovatus. Alæ modice angustæ, incumbentes. Abdomen seg-

mentis octo, elongatum, lineare. Pedes longiusculi, tenues, subnudi, inermes; coxæ breves; tibiæ non calcaratæ. *Mas.* Abdomen forcipibus analibus suberectis, hirtulis, modice longis, apice incurvo conniventibus. *Fœm.* Anus crassiusculus, stylis duobus modice longis, ensiformibus, nudis, nitidis, recurvis.

Body rather small, elongated, narrow, almost smooth, cinereous, occasionally yellowish. Head small. Eyes contiguous above, subconnate beneath. Proboscis short. Palpi four-jointed, decumbent; first joint very short, the rest nearly equal. Antennæ sixteen-jointed, filiform, slightly pilose, a little shorter than the thorax; first joint cylindrical; second cyathiform; third and following joints globose. Prothorax short. Thorax convex. Wings incumbent, rather narrow; mediastinal vein ending at a little before two-thirds of the length of the wing, joined by a veinlet to the subcostal at half the length; subcostal ending at a little before five-sixths of the length; radial and cubital springing from a common petiole, which nearly equals them in length, and springs from the subcostal somewhat beyond one-third of the length; radial forked at one-fifth of its length; its fore fork united near its base by a veinlet to the subcostal; cubital joined very near its base to the third externo-medial by a veinlet which at two-thirds of its length hindward emits the first externo-medial; the latter is united to the third externo-medial by a veinlet whose angle emits the second externo-medial; third externo-medial united to the subanal by a veinlet opposite the base of the second externo-medial; anal vein and axillary vein complete, the latter undulatory; discal areolet pentagonal. Abdomen elongated, linear, with eight segments. Legs slender, unarmed, rather long, nearly bare; coxæ short; tibiæ without spurs. *Male.* Anal forceps curved, conniving, moderately long, nearly erect, slightly hairy. *Fem.* Tip of the abdomen rather thick, with two ensiform, recurved, shining, moderately long styles.

This genus is very nearly allied to *Limnobia;* the species frequent marshy spots.

1. **stictica,** Meig. Zw. i. 148. 57 (1830); Mcq.; Schumm.; Gim.; Stæg.; Ros. (V.); Zett. Albida, thorace vittis tribus fuscis, *alis limpidis*, abdomine cinereo, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. $2\frac{1}{2}$–3; alar. 5–6 lin.

Cinereous. Head, pectus, and metathorax whitish. Palpi and antennæ black. Thorax with three brownish stripes, the lateral pair short. Pectus and metathorax hoary. Wings limpid; veins black, testaceous at the base and along the costa, where the transverse veinlets are slightly clouded with brown; stigma obsolete. Halteres white. Legs testaceous; tarsi, and tips of the femora and of the tibiæ, black.

Not rare. (E. S. I.)

2. **punctipennis,** Meig. Zw. i. 148. 57 (1818); St. Farg.; Mcq.; Zett.; Schumm.; Gim.; Stæg.; Ros. (V.) — *hybrida*, Meig. Klass. Cana, palpis antennisque nigris, thorace vittis quatuor fuscis, *alis sub-*

limpidis, venis nonnullis fusco-limbatis, abdomine nigro-cinereo, pedibus testaceis. Long. 2½–3; alar. 5–6 lin.

Hoary. Palpi and antennæ black, testaceous at the base. Thorax with four brown stripes, the outer pair short. Wings nearly limpid, clouded with brown by the costa at the base of the vein, and from two-thirds of the length to the tips, and also on the transverse veinlets. Halteres testaceous. Abdomen blackish-grey; tip testaceous. Legs testaceous.

Not rare. (E. S. I.)

Genus V. **LIMNOBIA.**

LIMNOBIA, Zett. D. S. x. 3802 (1851). *Tipula* p., L.; F.; Schr.; Gmel. *Limonia*, Latr.; Meig. Klass. *Limnobia* p., Meig.; Schumm. *Limnobia*, *Limnophila* et *Idioptera*, Mcq.; Stæg. *Limnobia* et *Glochina*, Meig. *Limnobia* et *Idioptera*, Hal. *Limnobia* et *Tricyphona*, Zett.

Corpus elongatum, sublineare, fere læve, magnum aut mediocre, nonnunquam parvum. Caput parvum, obpyriforme. Oculi rotundi, remoti. Proboscis modice longa. Palpi 4-articulati, cylindrici, crassiusculi, pubescentes, incurvi; articuli subæquales. Antennæ 15- aut 16-articulatæ, porrectæ, simplices, basi subincrassatæ, apice setaceæ; articulus primus crassus, cylindricus, longiusculus; secundus cyathiformis, crassior; tertius et sequentes rotundati, subpilosi. Thorax ellipticus. Alæ longæ, angustæ, incumbentes. Abdomen segmentis octo, elongatum, subdepressum. Pedes longi, inermes, subpubescentes; coxæ breves; tibiæ posticæ bicalcaratæ. *Mas.* Abdomen apice obtusum, forcipe brevi lata dentata. *Fœm.* Oviductus stylis duobus corneis acutis.

Body large, or of middle size, rarely small, elongated, almost smooth, nearly linear, cinereous, lurid yellow or testaceous, rarely black. Head small, obpyriform. Eyes round, remote. Proboscis moderately lengthened. Palpi four-jointed, cylindrical, pubescent, rather thick, curved downward; joints of nearly equal length. Antennæ fifteen or sixteen-jointed, porrect, simple, rather thick at the base, setaceous at the tips, generally but little longer than the head; first and second joints bare; first thick, cylindrical, rather long; second cyathiform, rather thick; the rest rounded, slightly pilose, successively decreasing in size. Thorax elliptical. Wings incumbent, long, narrow, most often bare, occasionally slightly pilose towards the tips. Abdomen with eight segments, elongated, slightly depressed (especially in the male). Legs long, minutely pubescent, unarmed; coxæ not elongated; posterior tibiæ with two minute apical spurs. *Male.* Tip of the abdomen obtuse, with a short, broad, dentated forceps. *Fem.* Oviduct with two, horny, acute styles, forming a vagina.

In the following descriptions the externo-medial veins are men-

tioned as three in number in all the species. The larvæ of most species live in the earth or in fungi, but that of *L. replicata* is aquatic, and its body is furnished with numerous long filamentous processes which appear to be internally supplied with air-tubes. It is furnished with anal claws, which in conjunction with its annular tension and relaxation, and the hooks of its mouth, assist it in walking over the aquatic plants. It can withdraw its head so completely that the anterior margin of the first segment of the body closes the orifice. The pupa has dorsal hooks on the three or four terminal abdominal segments. The species may be arranged in the following groups:—

a. Wings with a discal areolet.
- *b*. First externo-medial vein forked. Radial vein forked.
  - *c*. Fork of the first externo-medial vein with a petiole between it and the discal areolet.
    - *d*. Two veinlets between the subanal vein and the third externo-medial.—Meig. Zw. i. 121. Div. C. pl. 4. f. 16. *Idioptera*, Meq. Species 1–3.
    - *d d*. One veinlet between the subanal vein and the third externo-medial.
      - *e*. Radial vein united by a veinlet to the subcostal at its fork.—Meig. Zw. i. 125. Div. E. pl. 6. f. 2. *Limnophila* p., Meq. Species 4.
      - *e e*. Radial vein united to the subcostal at some distance beyond its fork.
        - *f*. Petiole of the first externo-medial vein a little shorter than its fork.—*Limnophila* p., Meq. Species 5, 6.
        - *f f*. Petiole of the first externo-medial vein as long as its fork.—Meig. Zw. i. 127. Div. G. pl. 4. f. 20. *Limnophila* p., Meq. Species 7–12.
        - *f f f*. Petiole of the first externo-medial vein longer than its fork.
          - *g*. Petiole of the first externo-medial not twice the length of its fork.—Meig. Zw. i. 122. Div. D. pl. 4. f. 15. *Limnophila* p., Meq. Species 13–15.
          - *g g*. Petiole of the first externo-medial vein twice the length of its fork. — *Limnophila* p., Meq. Species 16.
          - *g g g*. Petiole of the first externo-medial vein more than twice the length of its fork.—*Limnophila* p., Meq. Species 17.
          - *g g g g*. Petiole of the first externo-medial vein about six times the length of its fork.—Meig. Zw. i. 126. Div. F. pl. 6. f. 3.—*Limnophila* p., Meq. Species 18.

c c. Fork of the first externo-medial vein without a petiole between it and the discal areolet.—Meig. Zw. i. 131. Div. H. pl. 6. f. 4. *Limnophila* p., Meq. Species 19.

b b. First externo-medial vein not forked.

c. Radial vein forked.—Meig. Zw. i. 132. Div. K., L. pl. 5. f. 4, 6. *Limnophila* p., Meq. Species 20–22.

c c. Radial vein not forked.

d. Veinlet between the subanal and the third externo-medial in a line with the inner side of the discal areolet, or nearer to the base of the wing.

e. Subcostal vein ending where it joins the radial.—Meig. Zw. i. Div. P. pl. 4. f. 18. *Limnobia* p., Meq. Species 23–26.

e e. Subcostal vein prolonged beyond the veinlet which joins it with the radial.—Meig. Zw. i. 137. Div. O. pl. 4. f. 13. *Limnobia* p., Meq. *Glochina* p., Meig. Species 27–31.

d d. Veinlet between the subanal and the third externo-medial very nearly opposite the inner end of the discal areolet.—Meig. Zw. i. 133. Div. N. pl. 6. f. 5. *Limnobia* p., Meq. *Glochina* p., Meig. Species 32–42.

d d d. Veinlet between the subanal and the third externo-medial nearly opposite the middle of the discal areolet.

e. Subcostal vein ending where it joins the radial.—Meig. Zw. i. 133. Div. M. pl. 4. f. 19.

e e. Subcostal vein prolonged beyond the veinlet which joins it to the radial.—Meig. Zw. i. 147. Div. S. pl. 4. f. 17.

e e e. Subcostal vein not joining the radial.—Meig. Zw. i. 132. Div. L. pl. 5. f. 4.

d d d d. Veinlet between the subanal and the third externo-medial opposite one-third of the length of the discal areolet.

e. A veinlet between the radial vein and the costa.—Meig. Zw. i. 146. Div. R. pl. 6. f. 7. Species 43, 44.

e e. No veinlet between the radial vein and the costa. Species 45.

a a. No discal areolet.

b. Third externo-medial vein forked.

c. Radial vein joined by two veinlets to the subcostal. Species 46.

c c. Radial vein joined by one veinlet to the subcostal.

d. Cubital vein forked.—Meig. Zw. i. 148. Div. U. pl. 5. f. 8.—*Tricyphona*, Zett. Species 47.

d d. Cubital vein not forked.—Meig. Zw. vi. 279. Div. W. pl. 65. f. 4. Species 48, 49.

b b. Third externo-medial vein not forked.

c. Axillary vein curved abruptly to the hind border. Species 50.

c c. Axillary vein not curved abruptly to the hind border. Species 51–53.

Section 1.

a. Wings with a discal areolet.

b. First externo-medial vein forked. Radial vein forked.

c. Fork of the first externo-medial vein with a petiole between it and the discal areolets.

d. Two veinlets between the subanal vein and the third externo-medial.

This division comprises two very dissimilar sections.

Antennæ of the male longer than the thorax. Wings not dilated; mediastinal vein ending far before two-thirds of the length of the wing, joined to the subcostal by a veinlet very near its tip; subcostal ending at about four-fifths of the length; radial and cubital springing from a common petiole, which they rather exceed in length, and which proceeds from the subcostal at a little before half the length of the wing, and forms a nearly right angle, rejecting a rudimentary vein at its base; radial forked beyond one-fourth of its length; cubital joined near its base to the third externo-medial by a veinlet, whose angle emits the first externo-medial, the latter is forked at two-thirds of its length, and is connected with the third externo-medial by a veinlet, whose angle emits the second externo-medial; third externo-medial connected with the subanal by two veinlets, one before half the length of the wing, the other much before the middle of the discal areolet; subanal curved abruptly to the hind border; axillary slightly undulating; discal areolet hexagonal, more than twice longer than broad.

1. **fasciata,** L. S. N. ii. 973. 18 (1767); F.; Gmel.; Meig.; Schumm.?; Gimm.; Stæg.; Zett.—*maculata,* Meq.—*pulchella,* Winth.; Meig.; Hal. Cana, palpis antennisque nigris, *alis* sublimpidis *fasciis interruptis cinereis,* abdomine fulvo fasciis nigris, pedibus nigris, femoribus basi testaceis. Long. $2\frac{1}{2}$; alar. 5 lin.

Hoary. Palpi and antennæ black. *Wings* nearly limpid; *their borders adorned with grey spots which almost meet in the disc.* Halteres testaceous, with black knobs. Abdomen tawny, with a black band on the hind border of each segment. Legs black; femora testaceous towards the base.

Rare. Inhabits moors. (E. S. I.)

2. **trimaculata,** Zett. I. L. 833. 4 (1840). Cinerea, palpis antennisque nigris, thorace subimmaculato, *alis* cinereo-hyalinis *maculis tribus costalibus fuscis,* pedibus flavescentibus, femoribus tibiis tarsisque apice fuscis. Long. $2\frac{3}{4}$–3 lin.

Cinereous. Palpi and antennæ black. Thorax hardly spotted. *Wings* slightly cinereous, *with three brown costal spots at equal distances from each other;* transverse veinlets slightly clouded. Halteres pale. Legs yellowish; femora, tibiæ, and tarsi with brown tips.

Rare. (I.)

Section 2.

Antennæ of the male shorter than the thorax. Wings dilated, and almost angular on the hind border; mediastinal vein ending rather before two-thirds of the length of the wing, joined to the subcostal by a veinlet very near its tip; subcostal ending at about four-fifths of the length; radial and cubital springing from a common petiole, which they rather exceed in length, and which proceeds from the subcostal at some distance before half the length of the wing; radial forked before one-fourth of its length; cubital joined near its base to the third externo-medial by a veinlet, whose angle emits the first externo-medial; the latter is forked at half its length, and is connected with the third externo-medial by a veinlet whose angle emits the second externo-medial; third externo-medial connected with the subanal by two veinlets, one at a little before half the length of the wing, the other opposite the middle of the discal areolet; axillary vein undulating; discal areolet pentagonal, hardly twice longer than broad.

3. **marmorata,** Hoffm.; Meig. Zw. i. 121. 5.; Zett.; Gimm.; Schumm.; Stæg.; Ros. (V.)—*maculata*, Meig. Klass.—Var. *decora*, Hal. Cinerea, thorace quadrivittato, alis albidis, guttis plurimis cinereis aut fuscescentibus maculisque costalibus subquadratis obscurioribus, abdomine fasciis albidis, pedibus testaceis, femoribus apice fuscis. Long. 3–4; alar. 8–10 lin.

Cinereous. Palpi and antennæ black. Thorax with four brown stripes; metathorax and pectus hoary. Wings whitish, with numerous grey or brownish dots along the veins, and with some darker subquadrate spots along the costa. Halteres whitish, with brown tips. Abdomen with a whitish band on each segment. Legs testaceous; tips of the femora brown.

Not common. (E. S. I.)

Section 3.

d d. One veinlet between the subanal and the third externo-medial.

e. Radial vein united to the subcostal at its fork.

Mediastinal vein ending at a little before three-fourths of the length of the wing; subcostal ending at a little beyond the mediastinal; radial and cubital springing from a common petiole, which exceeds them in length, and which proceeds from the subcostal at much before half the length of the wing; radial forked before one-third of its length; its fore fork connected near the base by a transverse veinlet with the subcostal; cubital forming an angle near its base, and there connected with the third externo-medial by an oblique transverse veinlet, whose angle emits the first externo-medial; the latter is forked beyond half its length and is connected with the third externo-medial by a transverse veinlet, whose angle emits the second externo-medial; subanal curved abruptly to the hind border, connected with the third externo-medial

by a veinlet which is nearly opposite the middle of the discal areolet; discal areolet pentagonal, long and narrow.

4. **discicollis,** Meg.; Meig. Zw. i. 125. 13 (1818); Meq.; Zett.; Schumm.; Stæg.; Ros. (V.)—Var. *placida*, Walk. Fulva, capite supra palpis antennisque nigris, thorace vittis tribus fuscis, alis subluridis, abdominis dorso pedibusque fuscis. Long. 5; alar. 10 lin.

Tawny. Head black above. Palpi and antennæ black, tawny at the base. Thorax with three brown stripes, which are almost confluent. Metathorax greyish-black. Wings slightly lurid; veins black, testaceous towards the base; stigma brown. Halteres testaceous. Abdomen brown above; tip tawny; underside brown towards the tip. Legs brown, pubescent; coxæ tawny.

Not rare. Inhabits woods. (E.)

Section 4.

e e. Radial vein united to the subcostal at some distance beyond its fork.

f. Petiole of the first externo-medial a little shorter than its fork.

Veins pilose towards the tips; mediastinal vein ending at about two-thirds of the length of the wing, joined to the subcostal by a little veinlet close to its tip; subcostal ending at about five-sixths of the length; radial and cubital springing from a common petiole, which is nearly half their length, and which proceeds from the subcostal at a little beyond half the length of the wing; radial forked before one-third of its length; cubital joined to the third externo-medial by a transverse veinlet, whose middle emits the first externo-medial; first externo-medial forked before half its length, joined at some distance before its fork with the third externo-medial by a transverse veinlet, whose middle emits the second externo-medial; third externo-medial joined with the subanal by a veinlet which is opposite the middle of the long and almost tetragonal discal areolet.

5. **lucorum,** Meig. Zw. i. 125. 12 (1818); Meq.; Gimm.; Stæg.; Ros. (V.); Zett.—*aberrans*, Walk. *Cana*, palpis antennisque nigris, *thorace vittis quatuor fuscis, alis subcinereis, venulis transversis fusco sublimbatis*, abdomine fusco, pedibus testaceis, femoribus tibiis tarsisque apice fuscis. Long. 4–6; alar. 8–12 lin.

Hoary. Palpi and antennæ black, the latter sometimes testaceous at the base. *Thorax with four brown stripes*, the outer pair short. *Wings very slightly greyish; transverse veinlets slightly clouded with brown;* stigma indistinct. Halteres white, with brown knobs. Abdomen brown, testaceous at the tip. Legs testaceous; tarsi towards the tips, and tips of the femora and of the tibiæ, brown.

Common. Inhabits woods. (E. S. I.)

6. **tempestiva,** Walk. C. D. B. M. i. 53 (1848). *Fulva*, antennis nigris, *thoracis disco fusco, alis limpidis*, tarsis fuscis. Long. 4; alar. 9 lin.

Tawny. Antennæ black, longer than the head. *Disc of the thorax brown. Wings limpid;* veins brown; stigma pale brown. Halteres pale yellow, with brown knobs. Tarsi brown.

Not common. (E.)

Section 5.

ff. Petiole of the first externo-medial as long as its fork.

Species of large size, bright colour, and robust legs.

Mediastinal vein joining the subcostal at a little beyond two-thirds of the length of the wing; subcostal ending at about five-sixths of the length; radial and cubital springing from a common petiole, which is less than half their length, and which proceeds from the subcostal at far beyond half the length of the wing; radial forked before half its length; cubital forming near its base an angle, from whence springs the first externo-medial; the latter is forked beyond half its length, and is connected with the third externo-medial by two transverse veinlets, of which the outer one forms an angle, whence proceeds the second externo-medial; third externo-medial connected with the subanal by a transverse veinlet, which is opposite the middle of the hexagonal discal areolet.

7. **ferruginea,** Meig. Zw. i. 128. 19 (1818); Mcq.; Stæg.; Ros. (V.); Zett.—*flavescens,* Latr.; Meig. Klass.—*præusta,* Schumm. *Testacea,* palpis piceis, antennis apice fuscis, *thorace vittis tribus nigricantibus, alis subtestaceis, abdomine vitta dorsali nigra,* tarsis apice fuscis. Long. 5–6; alar. 10–12 lin.

Testaceous. Palpi piceous. Antennæ brown towards the tips. *Thorax with three blackish stripes, the lateral pair short. Wings slightly testaceous. Abdomen with a black dorsal stripe.* Tarsi brown towards the tips.

Not rare. (E. S. I.)

8. **punctum,** Meig. Zw. i. 128. 20 (1818). *Luteo-testacea,* capite cano, palpis antennisque nigris, *thorace vitta antica nigra, alis albidis,* stigmate fusco, *abdomine fascia subapicali nigra,* pedibus nigris, femoribus basi testaceis, tibiis fulvis. Long. 5–6; alar. 10–12 lin.

Luteous-testaceous. Head hoary. Palpi and antennæ black, the latter tawny towards the base. *Thorax with a black stripe in front. Wings whitish;* veins black, pale yellow at the base; stigma brown. Halteres whitish, brownish at the tips. *Abdomen with a black subapical band,* occasionally blackish along each side. Legs black; femora testaceous towards the base; tibiæ tawny.

Not rare. (E. S. I.)

9. **dispar,** Meg.; Meig. Zw. i. 129. 22 (1818); Mcq.; Perris; Stæg.; Ross. (V.); Zett. *Testacea,* capite palpis *pedibus*que *nigris,* antennis apice nigris, *alis sublimpidis, stigmate nigro-fusco, abdomine nigricante, femoribus basi coxisque testaceis.* Long. 5; alar. 17 lin.

Testaceous. Head and palpi black. Antennæ black towards their tips. *Thorax with a black stripe. Wings nearly limpid;* veins black, testaceous towards the base; *stigma dark brown.* Halteres with brownish tips. *Abdomen blackish, tawny at the tip. Legs black; femora towards the base and coxæ testaceous.*

The larva feeds on the dry stalks of *Angelica sylvestris.* Its habits are detailed by Perris in the Ann. Soc. Ent. Fr. 2me sér. vii. 331. Not rare. (E. S. I.)

10. **lineola,** Meig. Zw. i. 128. 21 (1818); Mcq.; Gimm.; Stæg.; Zett. *Lutea, capite albido,* palpis nigris, antennis testaceis apice nigris, *thorace vitta fusca, alis subcinereis, stigmate obsoleto,* tarsis fuscis. Long. 4; alar. 8 lin.

Luteous. Head whitish. Palpi black. Antennæ testaceous, black towards the tips. *Thorax with a brown stripe.* Pectus testaceous. *Wings very slightly greyish;* veins black, testaceous towards the base; *stigma obsolete.* Halteres whitish. Abdomen testaceous, long. Legs dull testaceous; tarsi brown.

Not rare. (E. S. I.)

11. **nigrina,** Meig. Zw. vi. 277. 71 (1818). *Nigra, thorace cinereo vittis tribus nigris nitidis,* pectore et metathorace canis, *alis subcinereis, stigmate nigro-fusco, femoribus basi coxisque fulvis.* Long. 4; alar. 8 lin.

Black, with grey tomentum. Palpi and antennæ black. *Thorax with three black shining stripes.* Pectus and metathorax hoary. *Wings greyish;* veins black, luteous at the base; stigma blackish-brown. Halteres tawny, with brownish tips. Legs black; femora towards the base and coxæ tawny.

Not common. (E.)

12. **straminea,** Meig. Zw. vii. 28. 88 (1838). *Testacea, alis limpidis,* femoribus tibiisque apice tarsisque fuscis. Long. 5; alar. 10 lin.

Testaceous. Wings limpid; veins testaceous, black towards the tips. Halteres with brown knobs. Tarsi and tips of the femora and of the tibiæ brown.

Rare. (E.)

Section 6.

fff. Petiole of the first externo-medial vein longer than its fork.

g. Petiole of the first externo-medial vein not twice the length of its fork.

Mediastinal vein joining the subcostal at a little before two-thirds of the length of the wing, connected with the costal by a transverse veinlet very near its tip; subcostal ending at about five-sixths of the length in a transverse veinlet between the radial and the costal; radial and cubital springing from a short common petiole, which proceeds from the subcostal at much beyond half the length of the wing; radial forked at much before half its length; cubital forming near its base an angle, whence proceeds the first externo-medial; the latter is forked at

two-thirds of its length, and is connected with the third externo-medial by two transverse veinlets; the outer one of these forms an angle, whence proceeds the second externo-medial; third externo-medial connected with the subanal by an oblique transverse veinlet, which is beyond the middle of the hexagonal discal areolet.—*Limnophila* p., Meq.

SUBSECTION 1.

Solitary species, with spotted wings and slender legs. Inhabit the banks of streams and of ponds.

13. **punctata,** Meig. Zw. i. 122. 6 (1818); Meq.; Gimm.; Schumm.; Stæg.; Ros. (V.); Zett.—*ocellaris?* L.; F.; Schr.; Gmel. —Var. *geniculata*, Hoffm.; Meig.; Gimm. Cana, palpis antennisque nigris, thorace vittis tribus cinereis, alis subalbidis guttis plurimis fuscis maculisque nonnullis obscurioribus, pedibus nigris, femoribus tibiisque basi pallidis. Long. 5; alar. 12 lin.

Hoary. Palpi and antennæ black. Thorax with three grey stripes. Wings dingy whitish, with many brown dots, and three or four darker brown spots, one at the tip of the axillary vein, the rest along the hind side of the subcostal vein; a row of small, dark brown, subquadrate spots between the subcostal vein and the costa; these extend from near the base to beyond the middle, where they are succeeded by three larger and more remote spots; veins black, testaceous at the base. Halteres whitish. Legs black, pubescent; tibiæ ferruginous towards the base; femora tawny, black towards the tips.

Not rare. (E. S. I.) Var. *α* much resembles var. *β geniculata,* but may be distinguished by its darker colour, the darker and more numerous spots of its wings, and especially by the greater length of the fork of the first externo-medial vein.

SUBSECTION 2.

Gregarious species, with ocellated wings and stout legs. Inhabit woods; their flight vertical, rising and falling.

14. **picta,** F. E. S. Suppl. 550. 80 (1805); Latr.; Lam.; Meig.; Meq.; Schumm.; Zett.; Gim.; Stæg.—*ocellaris,* Schr.; Curt.! B. E. 50; Guér.; Gimm. Cinerea, thorace antice fulvo, alis limpidis maculis ocellisque cinereis, abdomine lurido aut fusco, vittis tribus nigris, pedibus testaceis, femoribus nigro-cinctis. Long. 4–5; alar. 9–10 lin.

Grey. Head behind and thorax in front tawny. Proboscis and palpi black. Antennæ brown, testaceous towards the base, which is black. Wings limpid, more or less mottled with grey, and with three more or less complete grey ocelli. Halteres testaceous; knobs blackish at the base. Abdomen lurid or brownish, with three black dorsal stripes; hind borders of the segments whitish. Legs testaceous, pubescent; femora with one or two black bands; tarsi darker than the tibiæ.

Common. (E. S. I.)

SUBSECTION 3.

Species with short antennæ, unspotted wings, and stout legs.

15. **unicolor,** n. Lutea, capite cano, palpis antennisque nigris, alis subcinereis ad costam subtestaceis, tibiis et tarsorum articulis apice nigris. Long. 4; alar. 10 lin.

Luteous. Head hoary. Palpi and antennæ black, the latter tawny towards the base. Wings pale greyish, with a slight testaceous tinge, which is most apparent by the costa; stigma and halteres testaceous; tips of the tibiæ and of the joints of the tarsi black.

Rare. (E.)

Section 7.

g g. Petiole of the first externo-medial vein twice the length of its fork.

Mediastinal vein ending at rather before two-thirds of the length of the wing, forked at its tip; subcostal joining the costal at beyond three-fourths of the length, joined very near its tip with the radial by a transverse veinlet; radial and cubital springing from a common petiole, which proceeds from the subcostal at beyond half the length of the wing; radial forked near its base; cubital forming very near its base an angle, whence proceeds the first externo-medial; the latter is also rectangular near its base, and is forked at a little before two-thirds of its length, and is connected with the third externo-medial by two veinlets; the outer one of these forms a slight angle, whence proceeds the second externo-medial; third externo-medial connected with the sub-anal by a transverse veinlet, which is at one-third of the length of the discal areolet.

16. **tarda,** Walk. C. D. B. M. i. 41 (1848). Cinerea, antennis pedibusque nigris, thoracis lateribus canis, alis cinereis, venis transversis nebulosis, femoribus basi coxisque fulvis. Long. 3; alar. 7 lin.

Grey. Antennæ black, much longer than the thorax. Thorax hoary on each side. Wings grey; transverse veinlets clouded with darker grey; stigma dark grey; veins black. Halteres tawny, with brown knobs. Legs black; femora towards the base and coxæ tawny.

Not common. (E.)

Section 8.

g g g. Petiole of the first externo-medial vein more than twice the length of its fork.

Mediastinal vein ending at a little beyond two-thirds of the length of the wing, connected with the subcostal by a veinlet near its tip; subcostal ending at about five-sixths of the length; radial and cubital springing from a common petiole, which they nearly equal in length, and which proceeds from the subcostal at some distance before half the length of the wing; radial forked before one-sixth of its length; cubital forming very near its base an angle, and then connected with the

third externo-medial by a veinlet, whose angle emits the first externo-medial; the latter is forked at three-fourths of its length, and is connected with the third externo-medial by a veinlet, whose angle emits the second externo-medial; subanal connected with the third externo-medial by a veinlet, which is nearly opposite the middle of the pentagonal discal areolet.

17. **nemoralis,** Meig. Zw. i. 126. 15 (1818); Mcq.; Schum.; Gimm.; Ross. (V.); Stæg.; Zett.—var. *inclusa*, Walk.—var. *obsoleta*, Walk.—var. *adjuncta*, Walk. Cana, palpis antennisque nigris, pectore et metathorace albidis, alis subcinerascentibus, abdomine cinereo, pedibus testaceis, femoribus tibiisque apice tarsisque fuscis. Long. 3–3½; alar. 6–7 lin.

Hoary. Palpi and antennæ black. Pectus and metathorax whitish. Wings with a very slight greyish tinge; veins testaceous, blackish towards the tips; stigma greyish. Halteres whitish. Abdomen cinereous, testaceous at the tip. Legs testaceous; tarsi and tips of the femora and of the tibiæ brown.

Not rare. (E.)

SECTION 9.

g g g g. Petiole of the first externo-medial vein about six times the length of its fork.

Mediastinal vein ending at before three-fourths of the length of the wing, connected by a transverse veinlet near its tip with the subcostal, which ends at beyond three-fourths of the length; radial and cubital springing from a common petiole, which proceeds from the subcostal at a little before half the length of the wing; radial forked very near its base; first externo-medial springing from the cubital near the base of the latter, forked towards its tip, connected by two transverse veinlets with the third externo-medial; second externo-medial springing from the angle of the outer of the above veinlet, and rather nearer to the inner than to the outer one there is another transverse veinlet, which connects the third externo-medial with the subanal.—*Limnophila* p., Mcq.

18. **leucophæa,** Hoffm.; Meig. Zw. i. 127. 16 (1818); Ross. (V.); Zett. Var.? Testacea, capite pectoreque canis, palpis antennisque nigris basi testaceis, alis subcinereis, stigmate subobsoleto. Long. 3; alar. 6 lin.

Var.? Testaceous, slender. Head and pectus hoary. Palpi and antennæ black, testaceous at the base. Wings very slightly greyish; veins black, testaceous towards the base; stigma almost obsolete. Legs very slender.

Not common. (E.)

SECTION 10.

c c. Fork of the first externo-medial vein without a petiole between it and the discal areolet.

Mediastinal vein ending at rather beyond two-thirds of the length of the wing; subcostal ending at a little beyond five-sixths of the length;

radial and cubital longer than their common petiole, which forms an angle near its base, and is connected with the third externo-medial by an angular veinlet very near its fork; radial forked near its base, its fore fork connected by a short veinlet with the subcostal very near the tip of the latter; first and second externo-medial veins longer than their common petiole, which springs from the angular veinlet before mentioned, and which is connected by a veinlet at its fork with the fore branch of the third externo-medial; third externo-medial connected with the subanal by a veinlet in the short space between its fork and its junction with the cubital; discal areolet long, narrow, pentagonal.

19. **littoralis,** Meig. Zw. i. 131. 26 (1818); Meq.; Gimm. Lutea, capite cinereo, palpis nigricantibus, antennis testaceis apice fuscis, alis subcinereis, venis transversis fusco-limbatis, abdomine apicem versus fusco. Long. 5–6; alar. 9–11 lin.

Luteous, slender. Head cinereous. Palpi blackish. Antennæ testaceous, brown towards the tips. Wings narrow, slightly greyish; veins testaceous, blackish towards the tips; transverse veinlets slightly clouded with pale brown; stigma obsolete. Halteres testaceous. Abdomen brown towards the tip.

Not common. Inhabits watery situations. (E.)

Section 11.

b b. First externo-medial vein not forked.

c. Radial vein forked.

SUBSECTION 1.

Mediastinal vein ending at rather beyond two-thirds of the length of the wing; subcostal ending a little beyond five-sixths of the length; radial and cubital springing from a common petiole, which fully equals them in length, and proceeds from the subcostal at about one-third of the length of the wing; radial forked near its base; its fore fork connected very near the base by a transverse veinlet with the subcostal; cubital forming near its base an angle, from whence a transverse veinlet joins it with the first externo-medial; the latter is connected by an opposite transverse veinlet with the third externo-medial, to which it is also united nearer the tip of the wing by an angular veinlet, whence springs the second externo-medial; third externo-medial joined to the subanal by an oblique veinlet, which is not opposite the discal areolet, but nearer the base of the wing; axillary vein short.

20. **pilipes,** F. E. S. iv. 242. 39 (1792); Gmel.; Hoffm.; Meig.; Stæg.; Ross. (V.); Zett.—*fimbriata,* Meig.; Gimm.; Schumm. *Nigrofusca,* capite palpis antennisque basi *thoracis vittis tribus abdominis incisuris lateribus apiceque pedibusque ferrugineis, alis fuscis.* Long. 3–4; alar. 8–10 lin.

Blackish-brown, rather stout. Head, palpi, and antennæ at the base, *three stripes of the thorax, sides, sutures, and tip of the abdomen, and*

legs, ferruginous. Wings brown; veins black, ferruginous at the base. *Male.* Legs and sides of the abdomen very hairy. *Fem.* Hind tibiæ and sides of the abdomen slightly hairy, often bare.

Not common. Inhabits the banks of ponds. (E.)

21. **vagans,** Walk. C. D. B. M. i. 43 (1848). *Fœm. cinerea,* antennis nigris, *pectore abdomineque sordide fulvis, alis subcinereis,* stigmate fusco, *pedibus fulvescentibus, femoribus tibiisque apice tarsisque fuscis.* Long. 2½; alar. 6 lin.

Fem. Slender, greyish. Antennæ black, a little longer than the head, tawny at the base. *Pectus, abdomen, and legs dingy tawny. Wings slightly greyish;* stigma and veins brown. Halteres pale, with darker knobs. *Tarsi and tips of the femora and of the tibiæ brown.*

Not common. (E.)

SUBSECTION 2.

Mediastinal vein ending at a little beyond two-thirds of the length of the wing; subcostal ending at about five-sixths of the length, connected by a transverse veinlet near its tip with the radial; radial and cubital springing from a common petiole, which they rather exceed in length, and which proceeds from the subcostal at a little before the middle of the length of the wing, and is almost angular near its base; radial forked near its base; cubital connected by a transverse veinlet at its base with the first externo-medial; first externo-medial springing from the third, with which it is also connected by a transverse veinlet, whose angle is the origin of the second externo-medial; subanal connected with the third externo-medial by a transverse veinlet, which is very little beyond the base of the first externo-medial.

22. **errans,** Walk. C. D. B. M. i. 55 (1848).—var. *remota,* Walk. —var. *ignota,* Walk. *Fœm.* lutea aut fulva, antennis apice obscurioribus, thorace nonnunquam vitta cinerea, alis limpidis, abdominis dorso fulvo, pedibus flavis, femoribus tibiisque apice tarsisque fuscis. Long. 3–4; alar. 7–10 lin.

Fem. Luteous or tawny. Antennæ tawny, darker towards the tips, longer than the head. Thorax with an occasional greyish stripe. Wings limpid; veins brown, tawny towards the base. Abdomen above tawny. Legs yellow; tarsi and tips of the femora and of the tibiæ brown.

Not common. (E.)

SECTION 12.

c c. Radial vein not forked.

d. Veinlet between the subanal and the third externo-medial in a line with the inner side of the discal areolet, or nearer to the base of the wing.

e. Subcostal vein ending where it joins the radial.

Large bright-coloured species, with more or less variegated wings.

Mediastinal vein ending beyond two-thirds of the length, connected by a veinlet very near its tip with the subcostal; subcostal ending at

about five-sixths of the length, connected by a veinlet at its tip with the radial; radial and cubital springing from a common petiole, which they much exceed in length, and which proceeds from the subcostal at a little before half the length of the wing, and forms an angle near its base; cubital connected near its base with the third externo-medial by a veinlet which emits the first externo-medial; the latter is connected with the third externo-medial by a veinlet whose angle emits the second externo-medial; subanal connected with the third externo-medial by a veinlet in a line with the inner end of the pentagonal discal areolet.

SUBSECTION 1.

First externo-medial vein emitted from near the fore end of the veinlet; discal areolet thrice longer than broad.

23. **xanthoptera,** Meig. Zw. i. 141. 46 (1818); Meq.; Stain.; Gimm.; Schumm.; Stæg.; Ross. (V.); Zett. Lutea, antennis apice palpisque nigris, thorace vittis duabus discalibus maculisque duabus lateralibus nigricantibus, alis luteis, venulis transversis cinereo-limbatis, pedibus testaceis, femoribus tarsisque apice fuscis. Long. 5–6; alar. 10–12 lin.

Luteous. Palpi black. Antennæ tawny, black towards the tips. Thorax with two blackish stripes and a blackish spot on each side. Wings luteous; transverse veinlets clouded with grey. Halteres testaceous, with brownish knobs. Legs testaceous; tips of the femora and of the tarsi brown.

Not very common. (E.)

SUBSECTION 2.

First externo-medial vein emitted from the middle of the veinlet; discal areolet little more than twice longer than broad.

24. **maculata,** L. F. S. 1736 (1761); F.; Gmel.; Meig.; Schumm.; Gimm.; Zett.—*quadrinotata?* Meig.; Gimm.; Zett. Lutea, capite supra fusco, palpis antennisque nigris, thorace vittis tribus nigris, alis subcinereis nebulosis, maculis costalibus fuscis, abdomine fasciis abbreviatis nigro-cinereis, pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 5–6; alar. 10–12 lin.

Luteous. Head brown above. Palpi and antennæ black, the latter tawny towards the base. Thorax black in front, and with four black stripes, the outer pair short. Wings greyish, indistinctly mottled, and with seven brown spots along the costa. Halteres testaceous, with brown knobs. Abdomen with a transverse greyish-black spot on each segment. Legs tawny, pubescent; femora and tibiæ with black tips; tarsi black, except towards the base.

Not rare. (E.)

SECTION 13.

Mediastinal vein ending at a little before two-thirds of the length of the wing; subcostal ending at before five-sixths of the length, con-

nected at its tip with the radial by a transverse veinlet; radial and cubital vein proceeding from a common petiole, which is little more than half their length, and which proceeds from the subcostal at very much beyond half the length of the wing, and is not angular at its base; cubital connected near its base with the third externo-medial by a veinlet whose angle emits the first externo-medial; the latter is connected with the third externo-medial by a veinlet whose angle emits the second externo-medial; subanal connected with the third externo-medial veinlet, which is nearer than the discal areolet to the base of the wing.

25. **disjuncta,** Walk. C. D. B. M. i. 48 (1848). *Pallide ferruginea,* palpis antennisque nigris, *alis sublimpidis,* stigmate obsoleto, femoribus tibiisque apice tarsisque nigris. Long. 3; alar. 7 lin.

Pale ferruginous. Palpi and antennæ black, tawny at the base. Pectus and metathorax testaceous. *Wings nearly limpid;* veins black, testaceous at the base; stigma obsolete. Legs testaceous, tarsi and tips of the femora and of the tibiæ darker than the femora.

Rare. (E.)

26. **transversalis,** n. *Fulva,* capite palpis antennisque nigris, *thorace vittis tribus fuscescentibus, alis subcinereis apud costam albidis, maculis duabus costalibus apicibusque fuscescentibus, venulis transversis fusco-sublimbatis,* abdomine fusco maculis testaceis, pedibus testaceis, femoribus tibiisque apice tarsisque fuscis. Long. 4–4½; alar. 7 lin.

Tawny. Head black, with hoary tomentum. Palpi and antennæ black. *Thorax with three brownish stripes,* the lateral pair very short. *Wings very slightly greyish, almost whitish along the costa, where there are two brown spots;* tips brownish; *transverse veinlet slightly clouded with brown.* Halteres whitish, with blackish knobs. Abdomen brown, with a testaceous spot on each segment, except towards the tip, which is brown. Legs testaceous; tarsi, except at the base, and tips of the femora and of the tibiæ brown.

Not common. (E.)

Section 14.

e e. Subcostal vein prolonged beyond the veinlet which joins it to the radial.

Mediastinal vein almost contiguous to the subcostal, ending before two-thirds of the length of the wing; subcostal ending at rather beyond five-sixths of the length, united by a veinlet at some distance from its tip with the radial; radial and cubital springing from a common petiole, which is a little more than half their length, and proceeds from the subcostal at half the length of the wing; cubital united near its base with the third externo-medial by a veinlet, which emits the first externo-medial; the latter is united with the third externo-medial by an angular veinlet, whose hind-side, in most species, is much curved, and much longer and nearer to the base of the wing than its fore side,

and whose angle emits the second externo-medial; subanal united to the third externo-medial by a veinlet, in a line, or nearly so, with the inner end of the pentagonal discal areolet.—Species of moderate size, spotted wings, and slender legs; some of them, such as *L. nubeculosa*, frequenting woods, and gregarious in their dancing flight, as are most of the species in the following section.

27. **albifrons?** Meig. Zw. i. 137. 39 (1818).—*globata*, Walk.—var. *cera*, Walk. Fulva, antennis nigris, thorace vittis tribus nigris, *alis limpidis*, abdomine vittis tribus fuscis, tibiis apice tarsisque fuscis. Long. $2\frac{1}{2}$–3; alar. 5–7 lin.

Tawny. Antennæ black, much longer than the head. Thorax with three black stripes. *Wings limpid;* stigma obsolete; veins dark brown. Halteres yellow, with brown knobs. Abdomen with three brown stripes. Tarsi and tips of the tibiæ brown.—Var. β. Veinlet between the subanal vein and the third externo-medial nearer than the inner side of the discal areolet to the base of the wing.

Not common. (E.)

28. **tripunctata,** F. Sp. Ins. ii. 405. 26 (1781); Gmel.; Meig.; Mcq.; Gimm.; Schumm.; Stæg.; Ross. (V.); Zett.—*sexpunctata*, F.; Gmel.; Latr.; Lam.; Meig.; Mcq.—*phragmitidis*, Schr. Testacea, capite palpisque nigris, thorace vitta antica nigricante, *alis sublimpidis maculis tribus costalibus nigricantibus*, femoribus apice fuscis, tarsis nigris. Long. 4–5; alar. 7–8 lin.

Testaceous. Head and palpi black. Antennæ pale testaceous, darker towards the tips. Thorax with a blackish stripe in front. Wings nearly limpid, or with a very slight testaceous tinge in front, with three small blackish spots along the costa. Abdomen sometimes brown towards the tip. Legs pubescent; femora with brown tips; tarsi black.

Common. (E.)

29. **nubeculosa,** Meig. Zw. i. 140. 44 (1818); Mcq.; Gimm.; Schumm.; Stæg.; Ross. (V.); Zett. Fulva, capite palpis antennisque nigris, thorace vittis tribus fuscis, *alis albidis cinereo-nebulosis, maculis quatuor costalibus fuscis*, abdomine fusco, fasciis ventreque testaceis, pedibus fuscescentibus, femoribus testaceis nigro-trifasciatis. Long. 4–5; alar. 9–10 lin.

Tawny. Head, palpi, and antennæ black. Thorax with three broad brown stripes; the lateral pair short. *Wings whitish, mottled with grey, and with four brown spots along the costa.* Halteres testaceous, with brownish knobs. Abdomen brown, hind borders of the segments and underside testaceous. Legs brownish; femora testaceous, with three black bands.

Generally distributed. Inhabits woods. (E. S. I.)

30. **flavipes,** F. E. S. iv. 241. 35 (1781); Meig.; Schumm.; Stæg.; Zett. D. S.—*nebulosa*, Zett. I. L. Nigra, pectore ventreque sordide testaceis, *alis cinereis, maculis albidis tribusque costalibus obscure*

cinereis, pedibus testaceis, femoribus apice tarsisque nigris. Long. 4–5; alar. 9–10 lin.

Black. Pectus and abdomen beneath dingy testaceous. *Wings grey, with whitish spots; three darker grey spots on the costa.* Halteres testaceous; knobs brown. Legs testaceous, pubescent; tarsi and tips of the femora black.

Common. (E. S. I.)

31. **analis,** Meig. Zw. i. 141. 45 (1818).—*flavipes*, Meig. Klass. Nigra, pectore et metathorace canis, *alis albidis, cinereo-subnebulosis, maculis costalibus fuscis, venulis transversis fusco-limbatis.* Long. 4; alar. 9 lin.

Black, shining. Pectus and metathorax hoary. *Wings whitish, slightly mottled with grey; a row of brown spots along the costa; transverse veinlets clouded with brown.* Halteres pale testaceous, with brownish knobs.

Not common. (E.)

Section 15.

d d. Veinlet between the subanal and the third externo-medial very nearly opposite the inner end of the discal areolet.

Mediastinal vein ending at before two-thirds of the length of the wing; subcostal ending at three-fourths of the length, connected with the radial by a transverse veinlet close to its tip; radial and cubital springing from a common petiole, which proceeds from the subcostal at beyond half the length of the wing; first externo-medial proceeding from near the base of the cubital, connected by two transverse veinlets with the third externo-medial; second externo-medial proceeding from the angle of the outer of these veinlets, and in a line with the inner one another veinlet connects the third externo-medial with the subanal.

32. **Morio,** F. E. S. iv. 242. 40 (1792); Gmel.; Meig.; Stæg.; Zett. D. S.—*leucocephala*, Meig.; Meq.; Schumm.; Ross. (V.)—*angustipennis*, Zett. I. L. *Nigra*, nitens, *capite supra thoracisque vittis lateralibus argenteis, alis cinereis*, stigmate nigro, femoribus testaceis, apice nigris. Long. 2½–3; alar. 6 lin.

Black. Body shining. *Head silvery-white above. Thorax with a silvery-white stripe on each side. Wings grey;* stigma black. Halteres pale testaceous, with brownish knobs. Femora testaceous, with blackish tips.

Common. (E. S. I.)

33. **didyma,** Meig. Zw. i. 135. 35 (1818); Meq.; Schumm.; Stæg.; Ross. (V.); Zett. Cinerea, capite palpis antennisque nigris, pectore et metathorace canis, *alis albido-limpidis, maculis duabus costalibus fuscis, apicibus venulisque transversis fusco-sublimbatis*, pedibus testaceis, femoribus tibiisque apice tarsisque fuscis. Long. 3–4; alar. 6–8 lin.

Cinereous. Head, palpi, and antennæ black. Proboscis cinereous. Pectus and metathorax hoary. *Wings limpid, whitish, with two brown spots along the costa, slightly clouded with brown at the tips and on the transverse veinlets.* Halteres pale testaceous, with darker knobs. Abdomen testaceous at the tip. Legs testaceous; tarsi, except at the base, and tips of the femora and of the tibiæ, black. *Male.* Femora with an anteapical blackish band.

Common. (E. S. I.)

34. **dumetorum,** Meig. Zw. i. 136. 36 (1818); Mcq.; Schumm.; Stæg.; Ross. (V.); Zett. Fulva, capite palpis antennisque nigris, fronte argentea, thorace vittis tribus fuscis, *alis subcinereis, maculis tribus costalibus apicibusque fuscis, venis transversis fusco-limbatis,* abdomine fasciis fuscis, pedibus testaceis, tarsis apice fuscis. Long. 3; alar. 6 lin.

Tawny. Head, palpi, and antennæ black. Front silvery-white. Thorax with three brown stripes; lateral pair very short; a ferruginous stripe on each side. Pectus testaceous. *Wings slightly greyish, pale brown at the tips, and with three darker brown spots on the costa, one at half the length of the wing, the other at three-fourths of the length; transverse veinlets clouded with brown.* Halteres whitish, with brown tips. Abdomen with a broad brown band along the hind border of each segment. Legs testaceous; tarsi brownish towards the tips.

Not rare. (E.)

35. **chorea,** Wied.; Meig. Zw. i. 134. 43 (1818); Mcq.; Schumm.; Stæg.; Ross. (V.); Zett. Testacea, vertice palpis antennisque nigris, thorace vitta lata cinerea, *alis sublimpidis, venis nonnullis fusco-limbatis,* femoribus tibiisque apice tarsisque nigris. Long. 3; alar. 7 lin.

Testaceous. Vertex of the head black. Palpi and antennæ black, testaceous towards the base. Thorax with a broad grey stripe. *Wings nearly limpid; veins* testaceous, black and *slightly clouded with brown towards the tips;* stigma pale brown. Halteres pale testaceous. Legs slender; tarsi and tips of the femora and of the tibiæ black.

Generally distributed. (E. S. I.)

36. **lutea,** Meig. Zw. i. 133. 31 (1818); Mcq.; Gimm. *Testacea,* palpis antennisque nigris, *alis sublimpidis,* femoribus apice tarsisque sordide testaceis aut fuscis. Long. 3; alar. 7 lin.

Pale testaceous. Palpi and antennæ black, the latter testaceous at the base. *Wings nearly limpid;* veins testaceous; stigma testaceous, or very pale brown. Knobs of the halteres, tarsi, and tips of the femora dingy testaceous or brown.—Var. β. Stigma obsolete. Abdomen with an indistinct brownish dorsal stripe.

Generally distributed. (E. S. I.)

37. **modesta,** Wied.; Meig. Zw. i. 134. 32 (1818); Mcq.; Zett.; Gimm.; Schumm.; Stæg.; Ross. (V.) *Testacea,* capite cano, palpis antennisque nigris, *thorace vitta fusca, alis limpidis, abdomine vitta nigra,* femoribus tibiisque apice tarsisque fuscis. Long. 3–4; alar. 7–8 lin.

Testaceous. Head hoary. Palpi and antennæ black, testaceous at the base. *Thorax with a brown stripe. Wings limpid;* veins black, testaceous towards the base; stigma almost obsolete. Halteres pale testaceous, with brown knobs. *Abdomen with a black stripe.* Legs long, slender; tarsi and tips of the femora and of the tibiæ brown.—Var. β. Abdomen brown above.

Common. (E. S. I.)

38. **inusta,** Meig. Zw. i. 135. 34.; Meq. *Testacea, capite albido,* palpis antennisque nigris, *thoracis disco fulvo vitta nigra, alis limpidis,* pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 3–3½; alar. 7 lin.

Testaceous. Head whitish. Palpi and antennæ black. *Disc of the thorax tawny, with a blackish stripe. Wings limpid,* narrow; veins black, testaceous towards the base; stigma indistinct. Halteres testaceous, with brown knobs. Legs tawny; tarsi and tips of the femora and of the tibiæ black.

This may be a variety of *L. modesta.* Common. (E. S. I.)

39. **stigma,** Meig. Zw. i. 138. 40 (1818); Meq.; Stæg.; Zett.—*sexnotata,* Schumm. *Fulva, capite albido,* palpis antennisque nigris, *thorace vittis tribus fuscis,* pectore et metathorace canis, *alis subcinereis, stigmate fusco,* pedibus testaceis, tarsis fuscis.—Var. β, *thorace vitta nigra.*—Var. γ, *abdominis dorso fusco.* Long. 3–4; alar. 7–8 lin.

Dull tawny. Palpi and antennæ black, tawny towards the base. *Thorax with three brown stripes,* the lateral pair short. Pectus and metathorax hoary. *Wings very slightly greyish;* veins and stigma brown, the former testaceous along the costa. Halteres whitish, with brownish knobs. Abdomen testaceous at the tip. Legs testaceous, long, slender; tarsi brown.—Var. β. *Thorax with a black stripe.* Tips of the femora and of the tibiæ brown.—Var. γ. *Abdomen brown above.*

Common. (E. S. I.)

40. **stigmatica,** Meig. Zw. vi. 278. 77 (1830). *Cana,* palpis antennisque nigris, *thorace vittis tribus fuscis, alis angustis limpidis, stigmate nigro-fusco, abdomine cinereo vitta dorsali fusca,* pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 3–4; alar. 7–8 lin.

Hoary. Palpi and antennæ black. *Thorax with three broad brown stripes,* the lateral pair short. *Wings* narrow, *limpid;* veins black, testaceous at the base; a brown dot at the base of the vein; stigma large, dark brown. Halteres pale testaceous, with brown knobs. *Abdomen cinereous, with a broad brown dorsal stripe. Legs tawny;* tarsi and tips of the femora and of the tibiæ black.

Not rare. (E. I.)

41. **punctigera,** n. *Lutea,* palpis antennisque nigris, *thorace vitta fusca, alis sublimpidis,* stigmate fusco parvo, *abdomine fuscescente,* pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 4; alar. 8 lin.

Luteous. Palpi and antennæ black, testaceous at the base. *Thorax with a brown stripe. Wings nearly limpid;* veins black, strongly marked, testaceous at the base; stigma brown, small. Halteres testaceous. *Abdomen brownish, testaceous at the tip.* Legs testaceous; tarsi and tips of the femora and of the tibiæ black.

Not common. (E.)

42. **glabrata,** n. *Cana,* palpis antennisque nigris, *thoracis disco cinereo vittis tribus nigris, alis subcinereis, abdomine nigro-cinereo,* pedibus testaceis, tarsis et nonnunquam tibiis nigris. Long. 4–5; alar. 8–10 lin.

Hoary. Palpi and antennæ black. *Disc of the thorax cinereous, with three black stripes,* the lateral pair short. *Wings hardly greyish;* veins black, testaceous at the base; stigma nearly obsolete. Halteres whitish, with brown tips. *Abdomen greyish-black; tip testaceous.* Legs long, slender, dull testaceous; tarsi black.—Var. β. Legs black; femora tawny, black towards the tips.

Common. (E.)

d d d. Veinlet between the subanal and the third externo-medial nearly opposite the middle of the discal areolet.

e. Subcostal vein ending where it joins the radial.

e e. Subcostal vein prolonged beyond the veinlet which joins it to the radial.

e e e. Subcostal vein not joining the radial.

d d d d. Veinlet between the subanal and the third externo-medial opposite one-third of the length of the discal areolet.

e. A veinlet between the radial vein and the costa.

Section 16.

Mediastinal vein ending at hardly before two-thirds of the length of the wing; subcostal ending at about five-sixths of the length; radial and cubital much longer than their common petiole, which proceeds from the subcostal at rather far before half the length of the wing, and forms an obtuse angle very near its base; radial forked near its base; cubital joined at its base with the third externo-medial by a transverse veinlet, whose angle near its hind end emits the first externo-medial; the latter is connected with the third externo-medial by another veinlet, whose very obtuse angle emits the second externo-medial; subanal connected with the third externo-medial by a veinlet which is opposite one-fourth of the length of the discal areolet.

43. **inconclusa,** n. Ferruginea, capite cano, palpis antennisque nigris, pectore testaceo, alis subcinereis, pedibus testaceis, tarsis apice fuscis. Long. 3; alar. 7 lin.

Ferruginous. Head hoary. Palpi and antennæ black. Pectus testaceous. Wings very slightly greyish; veins brown, testaceous at the base. Halteres whitish, with brownish tips. Abdomen testaceous at the tip. Legs testaceous; tarsi brown towards the tips.

Not common. (E.)

Section 17.

Mediastinal vein ending at very much before two-thirds of the length of the wing; subcostal ending at about four-fifths of the length; radial and cubital springing from a common petiole, which proceeds from the subcostal at about half the length of the wing, and which they much exceed in length; radial forked at half its length; its fore fork very short; cubital joined very near its base with the third externo-medial, by a transverse veinlet, whose extremely obtuse angle near its hind end emits the first externo-medial; the latter is connected with the third externo-medial by a veinlet, whose middle, which is hardly angular, emits the second externo-medial; subanal connected with the third externo-medial by an oblique veinlet which is opposite one-fourth of the length of the discal areolet.

44. **tenella,** Meig. Zw. i. 146. 54 (1818); Meq.; Gimm. Cana, palpis antennisque nigris, thorace antico pectore et metathorace albidis, alis vix subcinereis, venis stigmateque pallidis, halteribus albidis apice fuscescentibus, abdomine fuscescente, pedibus testaceis, tarsis fuscis. Long. $3\frac{1}{2}$; alar. 8 lin.

Hoary. Palpi and antennæ black; front of the thorax, pectus, and metathorax whitish. Wings very slightly greyish; veins and stigma pale. Halteres whitish, with pale brownish tips. Abdomen brownish. Legs testaceous; tarsi brown.

Not common. (E.)

e e. No veinlet between the radial vein and the costa.

Section 18.

Mediastinal vein ending in a transverse veinlet at a little beyond two-thirds of the length of the wing; subcostal curved abruptly to the hind border at rather beyond five-sixths of the length; radial and cubital much longer than their common petiole, which proceeds from the subcostal at some space before two-thirds of the length of the wing; first externo-medial proceeding from the cubital at a little before one-third of its length, angular near its base, joined to the third externo-medial by two veinlets; second externo-medial springing from the middle of the outer veinlet; subanal connected to the third externo-medial by an oblique veinlet, which is nearer than the inner of the two before mentioned to the base of the wing.

45. **turpis,** n. Nigro-fusca, nitens, palpis antennisque nigris, thorace vittis duabus fulvis, pectore ferruginco, alis subcinereis, abdomine fusco, pedibus testaceis, femoribus tibiisque apice tarsisque fuscis. Long. $3\frac{1}{2}$–4; alar. 7–$7\frac{1}{2}$ lin.

Blackish-brown, shining. Palpi and antennæ black. Thorax with a short tawny stripe on each side in front. Pectus ferruginous, testaceous by the base of each wing. Wings greyish; stigma brown; veins

black. Abdomen brown. Legs dark testaceous; tarsi and tips of the femora and of the tibiæ brown.

Rare. In the British Museum. (E.)

a a. No discal areolet.

b. Third externo-medial vein forked.

c. Radial vein joined by two veinlets to the subcostal.

Section 19.

Mediastinal vein ending beyond three-fourths of the length of the wing, united at its tip to the subcostal by a little veinlet, which is occasionally wanting; subcostal ending beyond five-sixths of the length, united to the fore branch of the radial by two veinlets, which enclose the stigma; radial and cubital springing from a common petiole, which is less than half their length, and which proceeds from the subcostal at a little before two-thirds of the length; radial forked very near its base; cubital forming close to its base an angle, and then joined to the third externo-medial by a transverse veinlet, which emits the first and second externo-medial, the latter is forked very near its tip; third externo-medial forked at some little distance from its tip, joined to the subanal by a veinlet, which is nearer than the veinlet in front of it to the tip of the wing.

46. **finitima,** Walk. C. D. B. M. i. 52 (1848); cinereo-fusca, antennis nigris, thorace vittis quatuor fulvis, alis subfuscis, abdominis suturis pallidioribus, pedibus fulvis, femoribus tibiisque apice tarsisque fuscis. Long. 3–4; alar. 8–10 lin.

Greyish-brown. Antennæ black, about twice the length of the head. Thorax with four tawny stripes. Wings slightly brownish; stigma brown; veins dark brown. Halteres pale yellow, with brown knobs; hind borders of the abdominal segments paler. Legs dark tawny; tarsi and tips of the femora and of the tibiæ brown.

Not common. (E.)

c c. Radial vein joined by one veinlet to the subcostal.

d. Cubital vein forked.

Section 20.

Mediastinal vein ending at about three-fourths of the length of the wing; subcostal ending at half the distance between the mediastinal and the tip of the wing, connected with the radial by a transverse veinlet near its tip; radial and cubital springing from a common petiole, which proceeds from the subcostal at much beyond half the length of the wing; cubital forked at one-third of its length; first and second externo-medial springing from a common petiole, which is full twice their length, proceeds from the third externo-medial, and is connected by a transverse veinlet near its base with the base of the cubital; third externo-medial forked near its tip, connected with the subanal by an

oblique transverse veinlet, which is opposite the base of the first and second externo-medial veins.

47. **immaculata,** Meig. Zw. i. 148. 58 (1818); Meq.; Zett. Cinerea, palpis antennisque nigris, pectore cano, alis limpidis, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 3–4; alar. 6–8 lin.

Cinereous. Palpi and antennæ black. Pectus hoary. Wings limpid, narrow; veins black, testaceous towards the base; stigma obsolete. Halteres testaceous, with brownish knobs. Legs testaceous; tarsi and tips of the femora and of the tibiæ black.

Common. (E. S. I.)

d d. Cubital vein not forked.

SECTION 21.

Mediastinal vein ending at beyond three-fourths of the length of the wing; subcostal ending at beyond seven-eighths of the length, connected by a veinlet very near its tip with the radial; radial and cubital springing from a common petiole, which they exceed in length, and which proceeds from the subcostal at somewhat beyond half the length of the wing; cubital connected with the third externo-medial by a veinlet, which is opposite the base of the radial, and whose middle emits the first externo-medial; the latter is forked at a little beyond half its length; second and third externo-medial springing close to the above veinlet from a common petiole; third externo-medial connected by a veinlet close to its base with the subanal.

48. **occulta,** Meig. Zw. vi. 279. 79 (1830). Cinerea, thorace vittis tribus fuscis, pectore cano, alis subfulvescentibus, maculis costalibus et subapicalibus fasciaque abbreviata fuscis, halteribus pallidis apice fuscis, abdomine ferrugineo vitta fusca, femoribus basi coxisque fulvis. Long. 5; alar. 12 lin.

Cinereous. Thorax with three dark brown stripes; the middle one subdivided, the lateral pair abbreviated. Pectus hoary. Wings slightly tawny, with four brown spots along the costa, and one on the fork of the first externo-medial vein; the third costal spot forming a band. Halteres pale, with brown knobs. Abdomen ferruginous, with a brown stripe; femora at the base and coxæ tawny.

Not common. (E.)

SECTION 22.

Mediastinal veinlet ending at beyond two-thirds of the length of the wing, connected by a veinlet at its tip with the subcostal; subcostal ending at about five-sixths of the length; radial and cubital springing from a common petiole, which is about one-fourth of their length, and which proceeds from the subcostal at much beyond half the length of the wing; radial forked at one-fourth of its length; cubital connected

with the third externo-medial by a veinlet, whose angle emits a vein, which is the common petiole of the first and second externo-medial, and is rather less than half the length of the latter; first externo-medial forked before half its length; subanal connected with the third externo-medial by a veinlet, which is some distance beyond the veinlet between the third externo-medial and the cubital.

49. **secreta,** n. *Mas*, testacea, capite albido, palpis antennisque nigris, his basi testaceis, alis hyalinis, stigmate vix conspicuo, venis pallidis non bene determinatis, pedibus longis. Long. 3; alar. 7 lin.

Testaceous, slender. Head whitish. Palpi and antennæ black, the latter testaceous at the base. Wings limpid; stigma very indistinct; veins pale, slight.

Not common. (E.)

b b. Third externo-medial vein not forked.

c. Axillary vein curved abruptly to the hind border.

SECTION 23.

50. **sexmaculata,** Mcq. D.N.F. Tip. 91. 4 (1825); H.N.D. i. 96. 4; Meig.—*sexguttata,* Hal. "Cinerea, thorace vittis tribus obsoletis obscurioribus, antennis palpisque nigricantibus, alis pallide fusco-hyalinis fusco sexmaculatis, halteribus pallide flavescentibus, segmentorum abdominalium marginibus posticis anguste pallidioribus, femoribus ferrugineis, tibiis fusco-ferrugineis apice obscurioribus, tarsis fuscis. Long. 4; alar. 9 lin.

"Cinereous. Antennæ and palpi blackish. Mesonotum with three obsolete darker stripes. Wings light brownish-hyaline, with brown spots on the transverse veins and at the bifurcation; veins nearly as in *L. punctata;* the transverse veins which close the two brachial areolets nearly continuous, their brown shading continued along the bifurcation of the radial and cubital veins, and the embranchment of the former and the end of the mediastinal vein (here connected as usual with the costal and subcostal both) forming a sinuous band half across the wing; a large brown spot occupies the middle of the præbrachial areolet, extending over part of the pobrachial and the base of the inner radial, and to the costa; another near the base of the wing, occupying the base of the two brachial areolets, and also extending to the costa; at the tip of the anterior branch of the radial vein a brown dot, a brown spot across the middle of the anterior radial areolet, a brown cloud surrounds the closing veins of the discal areolet, and another the bifurcation of the first externo-median vein, and there are usually some faint brownish dots at the tip, or along the course of some of the externo-medial, and the cubital vein. The radial vein parts into two branches almost immediately after the emission of the cubital, and the anterior is there connected with the subcostal, and again in the middle within the brown spot, but the former connection is obsolete; the

petiole of the first externo-median vein is about as long as its branches.* Halteres pale yellowish; narrow hind edge of the abdominal segments lighter grey; vagina and valves shining-ferruginous, the latter very little curved upwards and acuminate at the tips; coxæ ferruginous-cinerascent; femora ferruginous, the tip dusky; tibiæ fusco-ferruginous, darker at the tips; tarsi fuscous.—Very closely allied to some species from the Arctic regions of North America."—*Hal. MSS.*

Rare. (E.)

c c. Axillary vein not curved abruptly to the hind border.

SECTION 24.

51. **lateralis,** Meq. H. N. D. ii. 653. 8 (1835); Meig.—*flavo-limbata,* Hal.—*manifesta,* Walk. *Atra, nitens,* mesothorace et scutello flavo-marginatis, pleuris flavo-maculatis, alis obscure hyalinis, halteribus pallide fuscis, abdominis lateribus flavo-lineatis, pedibus nigricantibus. Long. $2\frac{1}{2}$; alar. $5\frac{1}{2}$ lin.

"*Glossy black* (*or black-brown*). Antennæ blackish, sixteen-jointed. Mesonotum and scutellum edged, pleuræ spotted with clear light yellow. Wings obscure hyaline; a very pale stigmatic cloud behind the apex of the subcostal vein; veins fuscous, pubescent, very finely towards the tip, also the præfurca (common petiole of the radial and cubital veins); membrane glabrous; fork of the radial vein short, unconnected with the subcostal; anterior branch shorter than its petiole; branches of the first externo-medial vein longer than its petiole; axillary vein not sinuated, diverging widely from the anal, ending about half-way between the anal angle and the end of the anal vein; mediastinal vein ending nearly opposite the first fourth or third of the anterior radial areolet, and connected with the subcostal a little before this; no discal areolet; brachial nearly conterminous (Div. *A*, Meig). Halteres pale brown. Abdomen with a narrow yellow lateral line; last segment above and beneath with a narrow yellow edge behind. Legs nearly black, rather slender, finely pubescent; middle pair a little shorter than the rest. *Male.* Antennæ as long as the thorax. Forceps longer than the adjoining segment; outer arms with the first part thick, blackish; second one-half thinner, piceous, linear, truncated; inner appendages slender, palpiform. *Fem.* Antennæ a little shorter than the thorax. Tentacles slender, pointed, gently turned up, brown.—This species differs much in the veining of the wings from the true *Eriopteræ,* and especially in the disposition of the radial forked vein."—*Hal. MSS.*

Not common. (E. I.)

* The spot on the middle of the anterior radial areolet is sometimes half connected with the transverse one on the end of the discal areolet, by an intermedial dot on the cubital vein forming a second (but interrupted) half band, so that the marking of the wings may be described (beginning from the base) as two large anterior spots, two abbreviated sinuous transverse bands, the outer one interrupted, two small spots, one on the fork of the first externo-medial vein, one on the tip of the first radial branch.

52. **filata,** n. Cana, gracillima, palpis antennisque nigris, alis subcinereis perangustis, abdomine nigro-cinereo, pedibus nigris, femoribus basi fulvis. Long. 3; alar. 6 lin.

Hoary, very slender. Palpi and antennæ black. Wings greyish, very narrow; veins black, testaceous at the base; stigma obsolete. Halteres testaceous. Abdomen long, blackish-grey. Legs black; femora tawny at the base.

Not common. (E.)

SECTION 25.

Mediastinal vein ending at a little beyond two-thirds of the length of the wing; radial ending at beyond three-fourths of the length; radial and cubital springing from a common petiole, which they exceed in length, and which proceeds from the subcostal at somewhat beyond two-thirds of the length of the wing; radial forked at one-fourth of its length, connected by a veinlet at its fork with the subcostal; cubital connected near its base with the third externo-medial by a veinlet, which is opposite the veinlet which connects the third externo-medial with the subanal, and whose angle emits a vein, which is the common petiole of the first and second externo-medial; the two latter being about twice the length of their petiole.—Resembles the *Eriopteræ*.

53. **diuturna,** Walk. C. D. B. M. i. 54 (1848).—Var. *apparens*, Walk. *Fœm.* nigro-cinerea, antennis basi thoracisque lateribus testaceis, alis subcinereis, stigmate fuscescente, venis nigris basi testaceis, halteribus abdominis apice pedibusque testaceis. Long. 3–3½; alar. 6–7 lin.

Fem. Blackish-grey. Antennæ longer than the head, testaceous at the base. Sides of the thorax and tip of the abdomen testaceous. Wings slightly greyish; stigma pale brown; veins black, testaceous at the base. Halteres and legs testaceous, the latter slender.

Not common. (E.)

Genus VI. DICRANOTA.

DICRANOTA, Zett. Dipt. Scand. x. 4033 (1851). *Limnobia* p., Schumm.; Hal.; Zett. I. L.

Corpus elongatum, angustum, sublineare. Caput parvum, rotundatum. Oculi laterales, rotundi. Rostrum breve. Proboscis non elongata. Palpi exserti, cylindrici, incurvi, 4-articulati, articulis subæqualibus. Antennæ 13-articulatæ, subfiliformes; articulus primus breviusculus, cylindricus; secundus brevior, cyathiformis. Abdomen lineare. Pedes elongati, graciles, nudi; tibiæ calcaribus exiguis. *Mas.* Antennæ thorace paullo longiores; articuli ovales. Abdomen depressum; anus parvus, obtusus, parum subclavatus. *Fœm.* Antennæ thorace paullo breviores; articuli rotundati. Abdomen subcylindricum; anus sat acutus, stylis duobus subulatis, leviter recurvis.

Body long, slender, nearly linear. Head small, round. Eyes small, round, lateral, remote. Rostrum and proboscis short. Palpi four-jointed, cylindrical, curved downward; joints of equal length. Antennæ thirteen-jointed, nearly filiform; first joint cylindrical, rather short and stout; second shorter, cyathiform. Wings long and narrow. Abdomen linear. Legs long, slender, bare; tibiæ with minute spurs. *Male.* Antennæ a little longer than the thorax; third and following joints oval. Abdomen depressed; anus small, obtuse, slightly subclavate. *Fem.* Antennæ submoniliform, a little shorter than the thorax; third and following joints nearly round. Abdomen almost cylindrical; anus rather acute, with two subulate slightly recurved styles.

a. Wings with three externo-medial veins. Species 1.
a a. Wings with four externo-medial veins.
b. Wings with no discal areolet. Species 2.
b b. Wings with a discal areolet. Species 3.

1. **pavida,** Hal. E. M. i. 154 (1833).—*Guerini?* Zett.; Boh. Obscure flavida, antennis fuscis, thorace trivittato, alis hyalinis, stigmate pallido. Long. $2\frac{1}{2}$–3; alar. 6 lin.

Dull yellowish, slender. Antennæ brown. Thorax with three stripes. Wings hyaline; stigma very pale brown; veins delicately pubescent. Legs long and slender. *Fem.* Oviduct reddish.

Rare. In Mr. Haliday's collection. (I.)

2. **bimaculata,** Schumm. Dipt. Siles. 179. 54. pl. 4. f. 1 (1829). —*demissa*, Hal. Fusco-cinerea, thorace trivittato, alis stigmate fusco. Long. $2\frac{1}{2}$–$3\frac{1}{2}$; alar. 6 lin.

"Brownish-cinereous. Antennæ, abdomen, and legs dusky. Thorax with three stripes. Wings with veins like those of *Limnobia immaculata*, but the subcostal vein is connected with the first of the apex by two transverse veins, and the first branched one of the margin has a shorter fork."

Rare. In. Mr. Haliday's collection. (I.)

3. **senilis,** Hal. E. M. i. 153 (1833). Lurida, antennis abdomine pedibusque fuscis, alis obscuris pubescentibus, femoribus basi flavescentibus. Long. $2\frac{1}{2}$–3; alar. 6 lin.

"Dark reddish grist-colour. Vertex cinerascent. Antennæ about as long as the thorax, verticillate with long hairs, dingy ferruginous at the base, darker at the tips. Mesonotum clouded, not striped. Wings obscure hyaline; the veins and the membrane towards the tip finely pubescent; radial vein bifurcate; anterior branch joined near its origin by a transverse veinlet to the subcostal, forming two anterior radial areolets, which are sometimes imperfectly separated; inner one half as long as the præbrachial areolet; the connecting veinlet between the mediastinal and subcostal veins opposite its middle; exterior one dark with pubescence, forming an oblong stigma; posterior one gradually widening to the tip; cubital vein simple; discal areolet complete, receiving the pobrachial areolet in the middle; first externo-medial vein

forked, with the branches little more than half the length of the petiole. Halteres pale, with brownish tips. Abdomen dusky, pubescent, pale beneath. Hypopygium reddish. Forceps small. Legs dingy yellowish, finely pubescent; knees and tarsi dusky."

The veining of the wings very nearly agrees with *L. nemoralis:* the fork of the radial vein and of the first externo-medial vein is shorter; the subcostal and the mediastinal are evidently connected; the radial transverse veinlet is nearer the origin of the anterior radial branch; the veins are more strongly and extensively pubescent than in that species, and the membrane also is pubescent towards the tip. *L. nemoralis* has sixteen-jointed antennæ, and therefore cannot be referred to the same genus. From *D. bimaculata,* besides the perfect discal areolet, it differs in the wings, by the radial vein originating further from the end of the wing, the anterior branch joined to the subcostal by only *one* veinlet, and the pubescent veins."—*Haliday, MSS.*

Rare. In Mr. Haliday's collection. (I.)

Genus VII. **ULA.**

Ula, Hal. Ent. Mag. i. 153 (1833). *Cylindrotoma* p., Mcq.; Stæg. *Limnobia* p., Schumm.; Zett.

Corpus parvum, elongatum, angustum, pilosum. Caput parvum, subclavatum. Frons lata. Oculi rotundi, remoti. Proboscis longiuscula. Palpi 4-articulati, longiusculi, cylindrici, incurvi; articulus quartus paullo longior. Antennæ 17-articulatæ, porrectæ, simplices, subfiliformes; articulus primus breviusculus, cyathiformis; secundus subglobosus; tertius et sequentes oblongiusculi, subcylindrici, pilosi. Prothorax brevis. Thorax supra pilosus. Alæ incumbentes, latiusculæ, pilosæ. Abdomen segmentis octo, elongatum, hirsutum. Pedes tenues, longiusculi, inermes; coxæ breves; tibiæ posticæ calcaribus minutis apicalibus. *Fœm.* Alæ latæ.

Body small, elongated, narrow, pilose. Head small, subclavate. Front broad. Eyes round, remote. Proboscis rather long. Palpi four-jointed, incumbent, rather long; fourth joint rather longer than each of the others. Antennæ seventeen-jointed, porrect, simple, subfiliform; first joint rather short, cyathiform; second nearly globose; third and following joints somewhat oblong, nearly cylindrical, pilose. Prothorax short. Thorax pilose above. Wings incumbent, rather broad, pilose. Mediastinal vein ending at very little beyond two-thirds of the length of the wing; subcostal ending at about five-sixths of the length, connected by a transverse veinlet near its tip with the radial; radial and petiole springing from a common petiole, which they rather exceed in length, and which proceeds from the subcostal at a little be-

fore the middle of the length of the wing, and is almost angular near its base; radial forked near its base; cubital connected by a transverse veinlet at its base with the first externo-medial, the latter springing from the third externo-medial, with which it is also connected by a transverse veinlet, whose angle is the origin of the second externo-medial; subanal connected with the third externo-medial by a veinlet, which is very little beyond the base of the first externo-medial. Abdomen long, pilose, with eight segments. Legs slender, rather long, unarmed; coxæ short; hind tibiæ with minute apical spurs. *Fem.* Wings broad.

1. **pilosa,** Schumm. Dipt. Siles. 149. 34. pl. 2. f. 7 (1829); Zett. —*macroptera*, Mcq.; Stæg.; Zett.; Perris.—*mollissima*, Hal. Cinereo-lutescens, capite cinereo, palpis antennisque nigris, his basi ferrugineis, thorace vittis tribus obscuris intermedia gemina, alis cinereo-flavescentibus pilosis, stigmate parum distincto, abdomine fuscescente piloso, ano ferrugineo, pedibus ferrugineo-flavis, femoribus tibiisque apice tarsisque fuscis; *Fœm.* alis latis. Long. 2–3; alar. 6 lin.

Greyish-lutescent. Head grey. Palpi and antennæ black, the latter ferruginous at the base. Thorax with three dark stripes, the middle one double. Wings greyish-yellow, pilose; stigma indistinct. Halteres dingy white; club pale brown. Abdomen brown, hairy. Legs ferruginous-yellow; tarsi and tips of the femora and of the tibiæ brown. *Fem.* Wings very broad.

The larva has been found in an *Agaricus*. Rare. In Mr. Haliday's collection. (I.)

Genus VIII. **RHAMPHIDIA.**

Rhamphidia, Meig. Zw. vi. 282 (1830); Mcq.; Stæg.; Ross. (V.); Zett. *Limnobia* p., Meig. Zw. i.; Schumm. *Megarhina*, St. Farg. *Rhamphidia* et *Leptorhina*, Steph.

Corpus mediocre, elongatum, cylindricum, subpubescens. Caput parvum, rotundatum, postice leviter attenuatum. Oculi rotundi, remoti. Proboscis angusta, recta, cylindrica, capite duplo longius. Palpi 4-articulati, incurvi; articuli primus, secundus, et tertius oblongi; quartus paullo longior et angustior. Antennæ 16-articulatæ, breves, simplices, pilosæ, extrorsum subsetaceæ; articulus primus modice longus, cylindricus; secundus cyathiformis; tertius et sequentes globosi. Thorax ellipticus. Scutellum parvum. Alæ modice angustæ, incumbentes, parallelæ, nudæ. Abdomen elongatum, segmentis octo. Pedes longi, graciles, subnudi, inermes; coxæ breves; tibiæ calcaribus brevissimis. *Mas.* Anus parvus, forcipe inflexa. *Fœm.* Anus stylis duobus elongatis, subulatis, subrectis.

Body long, cylindrical, slightly pubescent, of moderate size. Head small, nearly round, slightly attenuated hindward. Eyes round, re-

mote. Proboscis slender, straight, cylindrical, twice the length of the head. Palpi four-jointed, inflexed; first, second, and third joints oblong; fourth a little longer and more slender. Antennæ sixteen-jointed, short, simple, pilose, subsetaceous towards the tips; first joint cylindrical, moderately long; second cyathiform; third and following globose. Thorax elliptical. Scutellum small. Wings incumbent, parallel, bare, rather narrow; mediastinal vein ending at before two-thirds of the length of the wing; subcostal ending at three-fourths of the length, connected with the radial by a transverse veinlet close to its tip; radial and cubital springing from a common petiole, which proceeds from the subcostal at beyond half the length of the wing; first externo-medial proceeding from near the base of the cubital, connected by two transverse veinlets with the third externo-medial; second externo-medial proceeding from the angle of the outer one of these veinlets; and in a line with the inner one another veinlet connects the third externo-medial with the subanal. Abdomen long, with eight segments. Legs long, slender, nearly bare, unarmed; coxæ short; tibiæ with very short spurs. *Male.* Anus small, with an inflexed pair of forceps. *Fem.* Anus with two long subulate, nearly straight styles.

With the exception of the long proboscis, this genus hardly differs from *Limnobia*, Div. *N*, Meigen.

1. **longirostris,** Meig. Zw. i. 146. 53 (1818); Mcq.; Schumm.; Stæg.; Ross. (V.); Zett. *Testacea*, capite nigro, *thorace vittis tribus fuscis*, alis sublimpidis, abdomine supra fusco, femoribus tibiisque apice tarsisque nigricantibus. Long. 4; alar. 8 lin.

Testaceous. Head, palpi, and antennæ black. *Thorax with three brown stripes.* Wings nearly limpid; veins brown, testaceous at the base; stigma indistinct, very pale brown. Halteres whitish, with brown knobs. Abdomen brown, testaceous at the tip, and mostly so beneath. Legs dark testaceous; tarsi and tips of the femora and of the tibiæ blackish.

Rare. In the British Museum, and in Mr. Haliday's collection. (E. I.)

2. **flava,** Steph. MSS. *Lutea*, capite nigro, proboscide gracillimo, alis limpidis angustis, pedibus testaceis, femoribus tibiisque apice tarsisque fuscis. Long. 4; alar. 7 lin.

Luteous, very slender, testaceous beneath. Head, palpi, and antennæ black. Proboscis very slender, nearly twice the length of the head. Wings limpid, narrow; veins brownish, testaceous towards the base. Halteres pale testaceous. Abdomen pale testaceous at the tip. Legs testaceous, long, slender; tarsi and tips of the femora and of the tibiæ brown.

Rare. In the British Museum. (E.)

Genus IX. **GERANOMYIA.**

GERANOMYIA, Hal. E. M. i. 155 (1833); Curt.; Mcq.

Corpus gracile. Caput subglobosum, obtrigonum. Clypeus rostriformis, productus, cylindricus, pilosus, supra acuminatus. Oculi magni, supra remoti. Proboscis porrecta, antennis multo longior. Labrum longum, lineare, apice subpilosum. Lingua linearis, longissima. Mentum breve. Labium longissimum, e basi fissum, lobis apicalibus obliquis ellipticis. Palpi breves, biarticulati? Antennæ 14-articulatæ, setaceæ, moniliformes, pubescentes, subsetosæ; articulus primus subcylindricus, longiusculus; secundus globosus; tertius et sequentes ovati; quartus-decimus attenuatus. Thorax gibbus, ovatus. Alæ incumbentes. Abdomen longum, gracile. Pedes longi, graciles, inermes. *Mas.* Abdomen lineare; anus lobis duobus lateralibus, unoque medio. *Fœm.* Abdomen apice conicum; anus spinis corneis.

Head subglobose, obtrigonate above. Clypeus rostriform, produced, cylindrical, hairy, acuminated above. Eyes large, remote above, contiguous beneath in both sexes. Proboscis porrect, much longer than the antennæ. Labrum long, linear, slightly hairy at the apex. Lingua linear, very long, pointed and a little dilated below the apex, which is hairy. Mentum short. Labium very long, divided from the base, forming two pilose branches, terminated by oblique elliptical lobes. Palpi short, biarticulate?, clothed with short hairs, attached to the anterior angles of the mentum; first joint globose; second subovate. Antennæ fourteen-jointed, setaceous, moniliform, pubescent, slightly setose; first joint subcylindrical, longer than the rest; second globose, rather stouter; the rest oval, slightly tapering; fourteenth a little longer, attenuated. Thorax gibbous, ovate. Scutellum semiovate. Wings incumbent; mediastinal vein ending at a little beyond half the length of the wing; subcostal ending at rather beyond three-fourths of the length, joined by a veinlet at its tip to the radial; radial and cubital springing from a common petiole, which proceeds from the subcostal at a little beyond half the length of the wing; cubital joined near its base to the third externo-medial by a veinlet, whose angle emits the first externo-medial; the latter is joined to the third externo-medial by a veinlet, whose middle emits the second externo-medial; subanal joined to the third externo-medial by a veinlet, which is opposite the discal areolet, near the inner end of the latter; discal areolet almost pentagonal, more than twice longer than broad. Abdomen long, slender. Legs long, slender, unarmed. *Male.* Abdomen linear, terminated by a central and two large lateral lobes. *Fem.* Abdomen conical towards the tip, furnished with horny spines.

1. **unicolor,** Hal. E. M. i. 156 (1833); Curt.! B. E. 573; Mcq. —*maculipennis,* Curt. Nigro-cinerea, thorace subferrugineo, alis cinereis apud costam fusco-maculatis, venis nigris basi pallidis, halteribus

sordide albidis, pedibus nigris, femoribus luridis. Long. 4–5; alar. 9–10 lin.

Blackish-grey. Thorax slightly ferruginous. Wings greyish, with some brownish more or less distinct marks along the costa; veins black, pale towards the base. Halteres dingy whitish. Legs black; femora lurid.

Not common. Inhabits shrubs and rocks near the sea-shore. (E. I.)

Genus X. **RHIPIDIA.**

RHIPIDIA, Meig. Zw. i. 153 (1818); Mcq.; Stæg.; Zett.

Corpus mediocre, elongatum, glabriculum. Caput parvum, rotundatum. Oculi rotundi, remoti. Proboscis modice elongata. Palpi 4-articulati, cylindrici, incurvi, pubescentes; articuli subæquales; primus paullo brevior. Antennæ 14-articulatæ, porrectæ; articulus primus cylindricus; secundus et tertius cyathiformes; quartus et sequentes globosi, remoti; quartus-decimus subovalis. Prothorax attenuatus. Thorax convexus. Alæ modice angustæ, incumbentes. Abdomen elongatum, segmentis octo. Pedes elongati, graciles, inermes; coxæ breves. *Mas.* Antennæ bipectinatæ, thorace vix breviores. Abdomen lineare, depressum, anus parvus, valvulis duabus rotundatis inflexis pubescentibus forcipatus. *Fœm.* Antennæ simplices, pilosæ, thorace paullo breviores. Abdomen lanceolatum, stylis duobus modice brevibus subulatis leviter recurvatis.

Body elongated, nearly bare, of moderate size. Head, small, round. Eyes round, remote. Proboscis moderately long. Palpi four-jointed, cylindrical, pubescent, decumbent; joints of nearly equal length; first a little shorter than the second. Antennæ fourteen-jointed, porrect; first joint cylindrical; second and third cyathiform; fourth and following joints globose, remote; fourteenth nearly oval. Prothorax attenuated. Thorax convex. Wings incumbent, moderately narrow; mediastinal vein ending at beyond half the length of the wing, connected with the subcostal by a veinlet at its tip; subcostal ending at four-fifths of the length, and then connected by a veinlet with the radial; radial and cubital springing from a common petiole, which is about half their length, and proceeds from the subcostal at beyond half the length of the latter; cubital connected at one-fourth of its length with the third externo-medial by a veinlet, whose angle emits the first externo-medial, and which is continued from the third externo-medial to the subanal; the angle of another veinlet between the first and third externo-medial emits the second externo-medial; anal vein and axillary vein complete; discal areolet long, subpentagonal. Abdomen elongated, with eight segments. Legs long, slender, unarmed; coxæ short. *Male.* Antennæ bipectinated, hardly shorter than the thorax. Abdomen linear, depressed; the forceps composed of two round, inflexed,

pubescent valves. *Fem.* Antennæ simple, pilose, a little shorter than the thorax. Abdomen lanceolate, with two subulate, rather short, slightly recurved styles.

1. **maculata,** Meig. Zw. i. 153. 1 (1818); Mcq.; Stæg.; Zett. Nigra, thorace vittis duabus dorsalibus lateribusque testaceis, alis limpidis guttis cinereis maculisque nonnullis costalibus obscurioribus, abdomine piceo, pedibus testaceis, femoribus tibiis tarsisque apice nigris. Long. 3–4; alar. 7–8 lin.

Black. Thorax mostly hoary, and with two hoary dorsal stripes on each side. Wings limpid, with numerous grey dots, and with four or five darker grey spots along the costa, which has a slight testaceous tinge. Halteres testaceous. Abdomen piceous, with large silvery-white spots along each side, tip tawny. Legs testaceous; tarsi towards the tips, and tips of the femora and of the tibiæ, black.

Generally distributed; is very partial to the Lime-tree. (E.S.I.)

Genus XI. **CYLINDROTOMA.**

CYLINDROTOMA, Mcq.; Stæg.; Ross. (V.); Loew; Zett. *Limnobia* p., Meig.; Schumm.; Zett. I. L. *Tipula* p., Zett. I. L.

Corpus mediocre, elongatum, angustum, glabriculum. Caput parvum, subclavatum. Oculi rotundi, remoti. Proboscis longiuscula. Palpi 4-articulati, crassiusculi, cylindrici, incurvi; articulus quartus paullo longior. Antennæ 17-articulatæ, porrectæ, simplices, subfiliformes; articulus primus breviusculus, cyathiformis; secundus subglobosus; tertius et sequentes oblongiusculi, subcylindrici, pilosi. Thorax convexus. Alæ incumbentes, modice angustæ. Abdomen segmentis octo, elongatum, subdepressum, basi valde angustatum, apud medium subdilatatum. Pedes graciles, longiusculi, inermes; coxæ breves; tibiæ posticæ calcaribus minutis apicalibus. *Mas.* Antennæ thorace paullo longiores; articuli subcylindrici. Abdomen apice clavatum, forcipibus extensis latis fornicatis. *Fœm.* Antennæ thorace paullo breviores; articuli subrotundati. Abdomen apice subtumidum, lamellis lateralibus subfoliaceis breviter acutis.

Body elongated, narrow, almost smooth, of moderate size, yellowish in the European species. Head rather small, obpyriform. Eyes round, remote. Proboscis moderately lengthened. Palpi four-jointed, exserted, cylindrical, rather thick, curved downward; fourth joint rather longer than the others. Antennæ with seventeen joints, porrect, pilose, simple, nearly filiform, as long as the thorax; first and second joints bare; first cyathiform, rather short; second subglobose; the rest oblong, nearly cylindrical. Thorax convex. Wings incumbent, bare, unspotted, long, rather narrow; mediastinal vein ending at three-fourths of the length of the wing, joined to the subcostal by a veinlet near its tip, which is free; subcostal joining the radial at four-fifths of

the length, united also to the costal near its tip by a veinlet, which is opposite the middle of the stigma; radial and cubital springing from a common petiole, which they rather exceed in length, and which proceeds from the subcostal at half the length of the wing; cubital joined close to its base to the third externo-medial by a veinlet, whose angle emits the first externo-medial; the latter is forked at half its length, and is joined very near its fork to the third externo-medial by a veinlet, whose angle emits the second externo-medial; third externo-medial joined to the subanal by a veinlet at one-third of the length of the discal areolet; subanal curved hindward at its tip; anal and axillary complete; discal areolet long, hexagonal. Abdomen with eight segments, elongated, slightly depressed, very narrow at the base, slightly widened about the middle. Legs slender, rather long, nearly bare, unarmed; coxæ not elongated; posterior tibiæ with minute apical spurs. *Male.* Antennæ a little longer than the thorax; joints nearly cylindrical. Abdomen clavate at the tip; the forceps extended, broad, curved. *Fem.* Antennæ a little shorter than the thorax; joints nearly round. Abdomen somewhat tumid at the tip, with subfoliaceous, acute, lateral lamellæ.

1. **distinctissima,** Wied.; Meig. Zw. i. 131. 27 (1818); Meq.; Schumm.; Zett.; Stæg.; Ross. (V.)—*brevicornis,* Zett. I. L. Testacea, palpis antennis *thoracis disco maculisque quatuor lateralibus nigris,* metathorace pectoreque nigro-unimaculatis, alis subcinereis, abdominis apice nigro, femoribus apice tibiis tarsisque nigris. Long. 5–6; alar. 9–11 lin.

Testaceous. Palpi and antennæ black, testaceous at the base. *Disc of the thorax black;* two black dots on each side, and one on the metathorax; a large black spot on the pectus. Wings greyish; stigma brown. Halteres pale testaceous, with black knobs. Abdomen dull testaceous, black at the tip. Legs black; femora dull testaceous, with black tips.

Not common. Inhabits woods. (E. S. I.)

2. **diversa,** n. Cana, *thorace vittis tribus nigricantibus,* alis luridocinereis, abdomine vitta dorsali nigricante, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 6; alar. 10 lin.

Hoary. Palpi and antennæ black. *Thorax with three blackish stripes.* Wings lurid-grey; stigma brown. Halteres brownish. Abdomen lurid, with a blackish dorsal stripe. Legs dull testaceous; tips of the femora, of the tibiæ, and of the tarsi, black.

This species differs from the typical *C. distinctissima* in the following characters of the wing-veins:—Veinlet between the subcostal and the costal more oblique; veinlet between the cubital and the third externo-medial much further from the base of the cubital; discal areolet nearly tetragonal. Rare. (S.)

Genus XII. **PEDICIA.**

PEDICIA, Latr. Gen. Crust. iv. 255 (1806); Meig. Klass.; Mcq.; Stæg.; Ross. (V.); Zett. D. S. *Tipula* p., L.; F.; D. G.; Gmel. *Limnobia* p., Meig.; Zett. I. L.; Schumm.

Corpus maximum, elongatum, fere læve, sat validum. Caput parvum, subelavatum. Frons tuberculata. Oculi rotundi, remoti, subpubescentes. Proboscis longiuscula. Palpi 4-articulati, cylindrici, subpilosi, decumbentes, sat validi; articuli primus, secundus, et tertius æquales; quartus longior. Antennæ 16-articulatæ, porrectæ, simplices, apice setaceæ, capite vix longiores; articulus primus crassus, cylindricus, longiusculus; secundus cyathiformis, validus; tertius et sequentes rotundati, subpilosi. Thorax ellipticus. Alæ angustæ, divaricatæ. Abdomen segmentis octo, depressum, longissimum. Pedes longi, subpubescentes, inermes, sat graciles; coxæ breves; tibiæ postieæ bicalcaratæ. *Mas.* Abdomen apice obtusum, forcipe brevi lata dentata. *Fem.* Oviductus stylis duobus corneis acutis.

Body very large, rather stout, elongated, almost smooth, cinereous. Head small, rounded or nearly obpyriform. Front with an anterior nearly double tubercle by the antennæ. Eyes round, remote, minutely pubescent. Proboscis moderately lengthened. Palpi four-jointed, exserted, cylindrical, slightly pilose, rather thick, curved downward; first, second, and third joints of equal length; fourth rather long, flexible. Antennæ sixteen-jointed, porrect, simple, somewhat stout at the base, setaceous at the tips, very little longer than the head; first joint thick, cylindrical, bare, rather long; second cyathiform, bare, rather thick; the rest rounded, somewhat pilose, successively decreasing in size. Thorax elliptical. Wings divaricate, bare, rather narrow; mediastinal vein ending at about three-fourths of the length of the wing; subcostal ending at a little before five-sixths of the length; radial and cubital springing from a common petiole, which nearly equals them in length, proceeds from the subcostal at half the length of the wing, and forms an angle very near its base; radial connected by a veinlet with the subcostal near the tip of the latter; cubital forked very near its base; an oblique veinlet extends from the petiole before mentioned to the third externo-medial, and is thence continued to the subanal; at half its length to the third externo-medial it emits the first externo-medial; the latter is forked beyond half its length, and at half the length of its petiole it is joined to the third externo-medial by a veinlet, whose angle emits the second externo-medial; anal vein and axillary vein complete; discal areolet pentagonal. Halteres bare, somewhat longer than the first segment of the abdomen. Abdomen elongated, somewhat depressed, with eight segments. Legs long, slightly pubescent, rather slender, unarmed; coxæ not elongated; posterior tibiæ with two small spurs. *Male.* Abdomen at the tip obtuse, with a short broad dentated forceps. *Fem.* Oviduct with two horny acute styles, forming a vagina.

1. **venosa,** L. F. S. 1738(1761); F.; D. G.; Gmel.; Latr.; Meig.; Meq.; Schumm.; Zett.; Gimm.; Stæg.; Ross. (V.)—*triangularis,* F.; Gmel. —*rivosa,* Schr. Alba, palpis antennisque fulvis apice nigris, thorace vittis tribus dorsalibus cinereis duabusque lateralibus testaceis, alis albo-limpidis, fascia obliqua vittaque fuscis, costa lurida, abdomine vittis duabus fuscis, pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 11–12; alar. 18–20 lin.

White. Palpi and antennæ tawny, black towards the tips. Thorax with a testaceous stripe along each side, and with three grey dorsal stripes, the lateral pair very short, the middle one subdivided in front. Wings limpid, mostly white in the disc, lurid along the costa, and with some brown marks towards the disc; a brown stripe along the subanal vein, and an oblique brown band clouding the transverse veinlets at the tip of the discal areolet. Halteres testaceous. Abdomen with two brown stripes. Legs tawny, pubescent; tarsi and tips of the femora and of the tibiæ black.

Not common. Inhabits moors and woods, and appears most frequently in the North. (E. S. I.)

Genus XIII. **DOLICHOPEZA.**

Dolichopeza, Curt. B. E. 62 (1825); Meig.; Meq.; Stæg.; Ross. (V.); Zett. *Tipula* p., Scop.; Mull. *Leptina,* Meig. Pl. 65. f. 10.

Corpus elongatum, gracile, sublæve, mediocre. Caput rotundum. Frons latissima. Oculi parvi, rotundi, valde remoti. Proboscis breviuscula. Palpi 4-articulati, exserti, incurvi; articuli breves, æquales. Antennæ 12-articulatæ, incurvæ, subfiliformes; articulus primus cylindricus; secundus brevissimus, cyathiformis; tertius et sequentes setacei, subpubescentes. Thorax ellipticus, convexus. Alæ sat latæ. Abdomen gracile, segmentis octo. Pedes longi, graciles, inermes; femora et tibiæ subæqualia; tarsi longissimi, tibiis fere duplo longiores. *Mas.* Antennæ thorace longiores. *Fœm.* Antennæ paullo breviores.

Body elongated, slender, nearly smooth, of moderate size. Head round. Front very broad. Eyes small, round, very remote. Proboscis rather short. Palpi four-jointed, exserted, curved downward; the joints short, of equal size. Antennæ twelve-jointed, curved, subfiliform; first joint cylindrical; second very short, cyathiform; third and following joints setaceous, minutely pubescent. Thorax elliptical; metathorax of moderate size. Wings long, moderately broad, with a stigma; mediastinal vein ending by the stigma at four-fifths of the length of the wing; subcostal ending by the tip of the stigma; radial and cubital springing from a common petiole, which is about one-sixth of their length, and which proceeds from the subcostal close by the

stigma; radial connected with the subcostal by a transverse veinlet at the tip of the stigma; cubital connected with the third externo-medial by a transverse veinlet; the angle of the latter emits the first externo-medial, which is forked before one-third of its length, and its fore fork is again divided at two-thirds of the length; third externo-medial connected with the subanal by an oblique veinlet, which is nearer than the veinlet in front to the tip of the wing; subanal vein and anal vein complete. No discal areolet. Halteres long. Abdomen with eight segments, slender. Legs long, slender, unarmed; femora and tibiæ of nearly equal length; tarsi very long, almost twice the length of the tibiæ. *Male.* Antennæ rather longer than the head and the thorax. *Fem.* Antennæ rather shorter.

The only known species of this genus may be at once distinguished from all the other British *Tipulidæ* by its long and very slender white tarsi.

1. **Chirothecata,** Scop. Ent. Carn. (1763).—*albipes,* Müll. Prodr. (1776).—*sylvicola,* Curt.! B. E. 62; Meig.; Stæg.; Ross. (V.); Loew; Zett. Testacea, vertice antennis thoracisque disco fuscis, alis subcinereis, abdomine fusco, tarsis albis. Long. 5; alar. 11 lin.

Testaceous. Vertex and disc of the thorax brown. Antennæ brown, testaceous at the base. Scutellum and sutures in front of it testaceous. Wings greyish; stigma dark brown; veins black, tawny towards the base. Halteres testaceous, with brownish knobs. Abdomen brown, testaceous at the tips. Legs dull testaceous; tarsi white towards the tips.

Inhabits shady woods, where it rests on the trunks of trees. (E. S. I.)

Genus XIV. **NEPHROTOMA.**

Nephrotoma, Meig. Zw. i. 202 (1818); Meq.; Stæg.; Zett. *Tipula* p., F.; Gmel.; Latr.

Corpus mediocre, elongatum, cylindricum, glabriculum. Caput rotundatum. Frons antice prominula. Oculi remoti. Proboscis breviuscula, crassiuscula, cylindrica, apice superne acuta. Palpi 4-articulati, incurvi, subcylindrici; articuli primus, secundus, et tertius subæquales; quartus longior et paullo angustior. Antennæ pilosæ; articuli primus et tertius subcylindrici; secundus cyathiformis. Prothorax distinctus. Thorax ellipticus, convexus. Scutellum parvum. Alæ lanceolatæ, divaricatæ, apice rotundatæ. Pedes longi, tenues, subnudi, inermes; tibiæ calcaribus brevissimis. *Mas.* Antennæ 19-articulatæ, arcuatim porrectæ, thorace longiores; articulus primus modice longus, apice nonnihil incrassatus; secundus brevissimus; tertius elongatus; quartus et sequentes subtus medio excisi; ultimi

simplices. Abdomen ano obtuso, subclavato, appendiculato. *Fœm.* Antennæ 15-articulatæ, capite saltem duplo longiores; articulus quartus et sequentes subcylindrici, basi paullo crassiores. Abdomen stylis duabus rectis subulatis.

Body long, cylindrical, nearly smooth, of moderate size. Head nearly round, slightly attenuated hindward. Front prominent in front. Proboscis cylindrical, rather short and thick, acute at the tip above. Palpi four-jointed, decumbent, nearly cylindrical; first, second, and third joints of nearly equal length; fourth longer, and a little more slender. Antennæ pilose; second joint cyathiform. Prothorax distinct. Thorax elliptical. Scutellum small. Wings lanceolate, divaricated, rounded at the tips; subcostal vein approaching the costa at the stigma, then receding from it and joining it at four-fifths of the length, connected with the radial by a short veinlet adjoining the stigma; radial and cubital springing from a common petiole which is about one-fourth of their length, and proceeds from the subcostal at two-thirds of the length; cubital forked very near its base, its hind fork forming an angle near the base, and there connected by a transverse veinlet with the third externo-medial; the middle of this veinlet emits the second externo-medial, and the latter is connected with the cubital by another veinlet which forms an angle in front, and there emits the first externo-medial; third externo-medial angular at its junction with the veinlet, which is continued across it to the subanal; anal and axillary complete; discal areolet pentagonal. Abdomen long, cylindrical, with eight segments. Legs long, slender, nearly bare, unarmed; tibiæ with two very short apical spurs. *Male.* Antennæ nineteen-jointed, a little longer than the head and the thorax; first joint moderately long, slightly incrassated at the tip; second very short; third elongated, cylindrical; fourth and following joints notched in the middle beneath; apical joints entire. Abdomen at the tip obtuse, subclavate, with appendages. *Fem.* Antennæ fifteen-jointed, at least twice the length of the head; first and third joints nearly cylindrical; fourth and following joints also nearly cylindrical, a little thicker at the base. Abdomen with two straight subulate anal styles.

1. **dorsalis,** F. Sp. Ins. ii. 403. 14 (1781); Gmel.; Latr.; Meig.; Meq.; Stæg.; Zett. *Mas et Fœm.* flava, verticis macula lanceolata palpis antennis thoracisque vittis tribus fuscis, alis vix subcinereis ad costam subtestaceis, stigmate pallidissime fusco, abdomine pallide luteo, vitta dorsali interrupta nigra, pedibus pallide luteis, femoribus tibiisque apice tarsisque fuscis. Long. 7–8; alar. 12 lin.

Male and Fem. Yellow. Vertex with a lanceolate brown mark. Palpi and antennæ brown, the latter yellow at the base. Thorax with three brown stripes, the lateral pair abbreviated; hind part with a luteous stripe. Wings hardly greyish, with an indistinct testaceous tinge in front; veins brown, testaceous at the base; stigma small, very pale brown. Halteres brown, testaceous towards the base. Abdomen pale lu-

teous, tawny at the tip; a black interrupted dorsal stripe. Legs pale luteous, very minutely pubescent; tarsi, except at the base and tips of the femora and of the tibiæ, brown.

Very rare. In the British Museum. (E.)

Genus XV. **TIPULA.**

TIPULA, Meq.; Stæg.; Ross. (V.); Zett. D. S. *Tipula* p., L.; F.; D. G.; Schr.; Scop.; Gmel.; Latr.; Meig.; Zett. I. L.; Gimm.

Corpus magnum aut maximum, raro mediocre, elongatum, cylindricum, parum pubescens. Caput parvum, rotundatum. Frons plana. Oculi rotundati, modice remoti. Proboscis sat longa, subcylindrica, apice superne acuta. Palpi 4-articulati, incurvi, subcylindrici; articuli primus, secundus, et tertius æquales, pilosuli; quartus elongatus, pubescens. Antennæ 13-articulatæ, porrectæ, simplices, subfiliformes, deorsum arcuatæ; articulus primus longiusculus, cylindricus; secundus parvus, cyathiformis; tertius et sequentes cylindrici aut subcylindrici, basi verticillato-pilosi; tredecimus parvus. Prothorax distinctus. Scutellum parvum. Metathorax paullo convexus. Alæ lanceolatæ, divaricatæ, basi angustæ, apice rotundatæ. Abdomen segmentis octo, elongatum, cylindricum. Pedes longi aut longissimi, sæpissime graciles, nudiusculi aut subpubescentes, inermes; calcares breves. *Mas.* Antennæ longiores. Anus obtusus, subclavatus, varie appendiculatus. *Fœm.* Antennæ breviores. Anus acuminatus, stylis duabus acutis.

Body large or very large, rarely of middle size, elongated, cylindrical, slightly pubescent. Head small, rounded, slightly attenuated behind. Front flat. Eyes round, moderately remote. Proboscis rather long, nearly cylindrical, acute at the tip above. Palpi four-jointed, decumbent, nearly cylindrical; first, second, and third joints nearly equal; fourth elongated, pubescent. Antennæ thirteen-jointed, porrect, simple, nearly filiform, of various length; first joint rather long, cylindrical; second small, cyathiform; the rest cylindrical or subcylindrical, verticillate-pilose. Prothorax distinct. Thorax elliptical. Scutellum small. Metathorax slightly convex. Wings lanceolate, divaricate, narrow at the base, rounded at the tips; mediastinal vein joining the subcostal at somewhat beyond two-thirds of the length of the wing; subcostal ending at a little before five-sixths of the length; radial and cubital springing from a common petiole, which is rather more or less than one-half of their length, and which proceeds from the subcostal at about two-thirds of the length of the wing; radial connected with the subcostal by an oblique veinlet before one-third of its length; cubital curved, forming very near its base an angle, and then connected by a veinlet with the third externo-medial; first externo-medial springing from the fore part of this veinlet, sessile in some species, but generally forked at half its length, and connected at some distance from its fork with the

third externo-medial by a veinlet whose angle emits the second externo-medial; third externo-medial inclined rather abruptly towards the hind border, connected by an oblique veinlet with the subanal, which is also bent towards the hind border; anal and axillary veins complete; discal areolet pentagonal. Legs long, or very long, generally slender, bare or very minutely pubescent; coxæ short; tibiæ with two short spurs; ungues small. *Male.* Antennæ longer. Abdomen at the tip obtuse, subclavate, with various appendages. *Fem.* Antennæ shorter. Abdomen at the tip acuminated, with two elongated styles. The ovipositor has two upper and two lower pieces; the former two sharp, and longer than the lower two, which are blunt. The upper pair forms the auger that bores a hole in the ground, and the lower conducts the eggs into it after it is bored.

The larvæ of most species feed on the roots of grass; they have two short horns on the head and several fleshy conical appendages at the tip of the abdomen. "The mandibles, which are transverse and unguiform, do not act against each other, but against two other fixed, internally concave and externally convex and dentated, pieces." The pupæ are naked, rather hard and opake; they have two respiratory tubes near the head, and the margins of the abdominal segments are furnished with spines, by means of which they rise to the surface of the ground preparatory to their assuming the winged state. The long legs are bent into three folds, but the tarsi are extended, and lie close to each other, the fore pair being the shortest.

"The female of *Tipula oleracea*, when engaged in laying eggs, moves over the grass with her body in a vertical position by the help—her four anterior legs being in the air—of her two posterior ones and the end of her abdomen, which performs the office of another. When upon the wing its fore legs are placed horizontally, pointing forwards, and the four hind ones stretched out in an opposite direction, the one forming the prow and the other the stern of the vessel in its voyage through air. The grubs sometimes destroy hundreds of acres, or whole districts, of grassland, in England and France. The pupæ may be often seen projecting from the surface of the earth, to which they have made their way from a depth of several inches by a successive wriggling of the abdominal segments, which are furnished with sharp points, admitting a progressive but not a retrograde motion."

"The female of *T. variegata* has been observed to lay her eggs thus:—Choosing a south bank bare of grass, she stood with her legs stretched out on each side, and kept turning herself half round backwards and forwards alternately. Thus the ovipositor made its way into the hard soil, and deposited her eggs in a se-

cure situation. All however were not committed to the same burrow, for she every now and then shifted her station, but not more than an inch from where she bored last."

Synopsis of the British species :—

a. Fork of the first externo-medial vein with a petiole between it and the discal areolet.

b. Wings of one colour, excepting the rather darker fore border and the stigma, and some distinct brown longitudinal marks, or with only three small brown spots, two on the hind border and one on the subanal vein.—*T. notatæ*, Schumm. Species 1.

b b. Wings much variegated, with three large brown spots on the fore border, three paler brown spots on the hind border, and a small brown spot on the anal vein. — *T. maculatæ*, Schumm. Species 2.

b b b. Wings more or less variegated with grey and white, of almost one colour in some species.—*T. marmoratæ*, Schumm.

c. Sides of the thorax with some conspicuous blackish-brown streaks. Species 3.

c c. Sides of the thorax without brown streaks.

d. Thorax with four brown stripes, which have not darker borders. Species 4–7.

d d. Thorax with four (rarely three) brownish-grey or grey stripes, with darker brown borders. Species 8, 9.

d d d. Thorax with three generally brown bordered stripes, of which the middle one is intersected by a dark brown stripe. Species 10.

b b b. Wings more or less variegated. Fore border darker than the wings elsewhere. Subanal vein towards its tip, the veinlet between it and the third externo-medial, wholly clouded with brown; the pobrachial areolet of one colour, without paler spots at the tip, the apical space of one colour, or with white bands. —*T. costato-nervosæ*, Schumm.

c. Abdomen with darker lateral stripes. Species 11, 12.

c c. Abdomen with a darker dorsal stripe. Species 13.

b b b b. Wings of one colour, limpid, with a dark brownish-yellow, brown or blackish fore border. Apical part of one colour, only the areolets in front of the discal areolet at the base more or less, or almost wholly, limpid.—*T. costatæ*, Schumm. Species 14–18.

b b b b b. Wings almost of one colour, with the costa not distinctly darker; the inner costal areolet partly whitish.—*T. unicolores*, Schumm.

c. Abdomen without stripes. Species 19–22.

c c. Abdomen with a darker dorsal stripe. Species 23, 24.

b b b b b b. Wings of one colour, occasionally darker in the apical part, with a white band which proceeds from the costa at the

base of the stigma and extends to the discal areolet or to the externo-medial areolet beyond it.—*T. lunato-fasciatæ*, Schumm.

c. Abdomen ashy-grey. Species 25.

c c. Abdomen luteous or testaceous. Species 26–30.

a a. Fork of the first externo-medial vein sessile.

b. Abdomen without stripes.—*T. unicolores*, Schumm. Species 31.

b b. Abdomen with three or four whole or interrupted brown or black stripes.—*T. vittatæ*, Schumm.

c. Wings with a dark brown costa. Species 32, 33.

c c. Wings with a pale brown or brownish-yellow costa.

d. Side stripes of the thorax straight. Species 34.

d d. Side stripes of the thorax curved. Species 35.

b b b. Abdomen with luteous or yellow bands.—*T. fasciatæ*, Schumm. Species 36, 37.

b b b b. Abdomen almost black, with two rows of yellow spots, which are sometimes almost confluent, and form two stripes.—*T. seriato-maculatæ*, Schumm. *T. pratensis*, L., belongs to this section, and has been recorded as British, perhaps erroneously.

1. **lutescens,** F. S. A. 24. 6 (1805); Meig.; Mcq.; Schumm.; Gimm.; Stæg.; Ross. (V.).—*fulvipennis*, D. G.; Meig. Klass. Cana, thorace vittis quatuor fuscescentibus, alis macula apud stigma strigaque costali albidis, stigmate fulvo, abdomine vitta nigricante, pedibus testaceis; *Mas*, alis cinereis; *Fœm.* alis luridis. Long. 8–11; alar. 18–22 lin.

Hoary. Proboscis ferruginous. Palpi brownish. Antennæ tawny. Thorax testaceous in front and along each side, with four pale brownish stripes with darker borders, the outer pair short. Wings with a whitish spot by the stigma, and a whitish streak between the stigma and the base, slightly clouded with grey towards the tips, and with a grey spot between the subanal vein and the anal vein; stigma tawny. Halteres blackish, whitish at the base of the club, which is hoary. Abdomen with a blackish stripe along each side; tip ferruginous. Legs testaceous, pubescent; tips of the femora ferruginous. *Male.* Wings grey. *Fem.* Wings lurid.

Not rare. (E. S. I.)

2. **gigantea,** Schr. Beitr. (1776); I. A. 845 (1781); Gmel.; Latr.; Meig.; Mcq.; Schumm.; Gimm.; Stæg.; Ross. (V.); Zett.—*rivosa*, Scop. Ent. Carn. 318. 846 (1763).—*sinuata*, F.; Gmel.—*hortorum*, Herbst. Ferruginea, thorace cano vittis tribus fuscis, alis cinereis apud costam fuscis, vitta discali albida, femoribus tibiisque apice tarsisque nigris. Long. 10–13; alar. 22–26 lin.

Ferruginous, with whitish tomentum. Antennæ not twice the length of the proboscis. Palpi black, ferruginous towards the base. Thorax hoary, with three brown stripes; incisures, postscutellum, and pectus whitish. Wings brown in front, grey behind, both colours indented by a whitish irregular angular discal stripe. Abdomen grey at the tip.

Coxæ and trochanters grey, the former with whitish tomentum; tarsi and tips of the femora and of the tibiæ black.

Not rare. (E. S. I.)

3. **rufina,** Meig. Zw. i. 176. 10 (1888); Mcq.; Schumm. Cana, thorace vittis quatuor fuscis, alis cinereis albido-maculatis, abdomine lurido segmentorum marginibus posticis testaceis, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 5–6; alar. 12–14 lin.

Hoary. Proboscis piceous. Palpi and antennæ black, the latter testaceous at the base. Thorax with four brown stripes, the outer pair short. Wings grey, with four or five whitish spots, the most conspicuous one adjoining the stigma, which is brown. Halteres testaceous; knobs brown. Abdomen lurid; hind borders of the segments testaceous. Legs black, very slender; tibiæ dull testaceous towards the base; femora testaceous with black tips.

Common. (E. S. I.)

4. **hortensis,** Meig. Zw. i. 178. 12 (1818); Mcq.; Schumm.; Zett. Cana, *thorace vittis sex fuscis,* alis cinereis albido-quadrimaculatis, abdomine lurido vitta dorsali apiceque piceis, pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 6–7; alar. 13–14 lin.

Hoary. Proboscis piceous, tawny beneath. Palpi testaceous. Antennæ black, tawny at the base. *Thorax with six broad brown stripes;* metathorax and pectus whitish. Wings grey, with four irregular whitish spots on the disc, and one on each side of the stigma, which is brown. Halteres testaceous, with brown knobs. Abdomen lurid; dorsal stripe and apical part piceous. Legs tawny; tarsi and tips of the femora and of the tibiæ black.

Not rare. (E. S. I.)

5. **longicornis,** Schumm. Tip. 32. 8 (1833). Cana, antennis fuscis basi testaceis subverticillato-pilosis, *thorace vittis quatuor latis fuscis,* alis cinereis maculis tribus albidis duabusque fuscis, abdomine lurido vitta dorsali fusca, pedibus subpubescentibus, femoribus tibiisque apice tarsisque nigricantibus, femoribus testaceis, tibiis ferrugineis. Long. 6–7; alar. 12–13 lin.

Male and Fem. Hoary. Proboscis and palpi testaceous. Antennæ brown, thinly verticillate, pilose, testaceous at the base; joints elongated. *Thorax with four broad brown stripes. Wings* grey, *whitish about the stigma, and with two whitish spots in the disc; a brown spot at the base of the petiole of the radial and cubital veins, and another joining the hind border of the stigma,* which is also brown. Halteres testaceous, with brownish knobs. Abdomen lurid, with a brown dorsal stripe. Legs minutely pubescent; tarsi and tips of the femora and of the tibiæ blackish; femora testaceous; tibiæ ferruginous. *Male. Antennæ rather more than half the length of the body. Fem.* Antennæ a little shorter than the thorax.

Rare. In Mr. Haliday's collection. (I.)

6. **varipennis,** Hoffm.; Meig. Zw. i. 183. 20 (1818); Schumm.; Stæg.; Zett. D. S.—*simplicicornis,* Zett. I. L. Cana, *thorace vittis quatuor fuscis,* alis cinereis maculis albidis, venis fusco-limbatis, abdomine cinereo segmentorum marginibus posticis testaceis, pedibus nigris; *Mas,* femoribus basi testaceis; *Fœm.* femoribus tibiisque testaceis. Long. 6; alar. 12–14 lin.

Hoary. Palpi and antennæ black. *Thorax with four brown stripes;* metathorax and pectus whitish. *Wings* grey, *with some whitish spots in the disc,* and with a lurid tinge along the costa; veins slightly clouded with brown. Halteres testaceous, with brown knobs. Abdomen grey; hind borders of the segments slightly testaceous. Legs black. *Male.* Femora testaceous towards the base. *Fem.* Femora and tibiæ testaceous.

Not common. (E. S. I.)

7. **lineola,** Meg.; Meig. Zw. i. 181. 18 (1818). Cana, *thorace vittis tribus fuscis,* alis albidis, abdomine testaceo vitta dorsali nigra, pedibus testaceis, femoribus tibiisque apice tarsisque fuscis.—Var. *β.* Alis cinereo-nebulosis. Long. 6; alar. 10–11 lin.

Hoary. Palpi and antennæ black. *Thorax with three brown stripes.* Pectus and metathorax whitish. Wings nearly limpid; veins brownish; stigma whitish. Halteres whitish. Abdomen testaceous, with a slender black dorsal stripe. Legs testaceous; tarsi and tips of the femora and of the tibiæ brown.—Var. *β.* Wings grey; disc of the areolet whitish.

Not common. (E.)

8. **excisa,** Schumm. Tip. 42. 13 (1833).—*montana,* Curt.—*speculum,* Zett. Cana, antennis testaceis nigro-cinctis, *thorace vittis tribus duplicatis fuscis,* alis cinereis albo-maculatis apud stigma fuscis, abdomine lurido, pedibus testaceis, femoribus apice tarsisque nigris. Long. 7; alar. 16 lin.

Hoary. Proboscis ferruginous. Palpi black. Antennæ testaceous, with black rings, wholly black towards the tips. *Thorax with three double brown stripes;* metathorax and pectus whitish. Wings grey, with several white spots, brown about the stigma, which is also brown. Halteres testaceous, with brown knobs. Abdomen lurid. Legs testaceous, pubescent; femora with black tips; tarsi black, testaceous towards the base.

Inhabits the summits of mountains. (E. S. I.)

9. **nubeculosa,** Meig. Zw. i. 174. 7 (1818); Meq.; Zett.; Schumm.; Gimm.; Stæg.; Ross. (V.).—*hortorum,* L.? F.—*obsoleta?* Meig.; Schumm.; Zett.—*guttulifera?* Zett. Cana, *thorace vittis septem fuscis,* alis subcinereis maculis albidis fuscisque, abdomine testaceo vittis duabus nigris, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 6–7; alar. 14–16 lin.

Hoary. Proboscis tawny. Palpi and antennæ blackish, testaceous towards the base. *Thorax with seven brown stripes,* the two outer pair short, the middle one very slender. Pectus and metathorax whitish.

Wings greyish, with several whitish spots, and with three brown spots along the costa, and with a fourth between the subanal vein and the anal vein; stigma brown. Halteres testaceous, with brownish knobs. Abdomen testaceous, with a black stripe on each side. Legs testaceous; tarsi and tips of the femora and of the tibiæ black.

Common. (E. S. I.)

10. **pabulina,** Meig. Zw. i. 180. 16 (1818); Meq.; Schumm.; Stæg.; Zett.—*hortorum?* L. Cinerea, thorace vittis quatuor fuscis, alis subcinereis maculis diffusis albidis, stigmate fusco, abdomine cinereo-fusco segmentorum marginibus basique testaceis, pedibus testaceis. Long. 5–7; alar. 14–16 lin.

Cinereous. Proboscis ferruginous. Palpi and antennæ black, testaceous towards the base. Thorax with four brown stripes; sides, pectus, and metathorax hoary. Wings very slightly greyish, with four irregular whitish spots in the disc, and one between the tip and the stigma, which is brown; transverse veinlets slightly clouded with brown. Halteres testaceous; clubs partly brown. Abdomen greyish-brown; hind borders of the segments and base testaceous. Legs testaceous; femora and tibiæ darker at the tips; tarsi black towards the tips.

Common. (E. S. I.)

11. **lateralis,** Meig. Zw. i. 174. 6 (1818); Meq.; Schumm.; Zett.; Stæg.; Ross. (V.). Cana, *thoracis disco cinereo-fusco vittis duabus canis, alis cinereis signa obliqua alba,* abdomine supra cinereo-fusco vitta cana, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 5–7; alar. 12–14 lin.

Greyish-brown. Head hoary in front and beneath. Palpi and antennæ black. *Thorax with two hoary stripes; fore part, hind part,* sides, and pectus hoary. *Wings grey, with an oblique white mark by the stigma,* which is blackish; transverse veinlets clouded with black. Halteres testaceous; knobs black. Dorsal stripe and under side of the abdomen hoary. Legs testaceous; tarsi and tips of the femora and of the tibiæ black.

Common. (E. S. I.)

12. **marginata?** Meig. Zw. i. 173. 5 (1818); Meq.; Schumm.; Stæg.; Zett. Cana, *thorace vittis sex indistinctis cinereis, alis cinereis albo-univittatis et unimaculatis,* abdomine vittis duabus lateralibus nigris, pedibus testaceis, femoribus tibiisque apice tarsisque nigricantibus. Long. 7–8; alar. 14–16 lin.

Hoary. Proboscis piceous. Palpi and antennæ black, the latter testaceous at the base. *Thorax with six indistinct cinereous stripes;* metathorax and pectus whitish. *Wings grey, with a white spot between the subanal vein and the third externo-medial vein, connected with a white undulating stripe, which is dilated at the base, and extends from near the discal spot to the tip.* Halteres piceous. Abdomen with a black stripe

along each side. Legs testaceous, pubescent; femora and tibiæ towards the tips and tarsi blackish.

Not common. (E.)

13. **vernalis,** Meig. Zw. i. 182. 19 (1818); Mcq.; Schumm.; Gimm.; Stæg.; Ross. (V.); Zett. Cana, thorace vittis tribus fuscis, alis cinereis apud discum albidis, abdomine fulvo vitta dorsali nigra, pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 5–6; alar. 12–14 lin.

Hoary. Proboscis ferruginous on each side. Palpi and antennæ black; second joint of the antennæ testaceous. Thorax with three brown stripes, the middle one very broad. Wings grey, whitish in most of the disc, the white part terminating by the discal areolet, and by the stigma, which is brown; transverse veinlets slightly clouded with brown. Halteres testaceous, with blackish knobs. Abdomen tawny, with a black dorsal stripe, which is interrupted on the hind border of each segment. Legs tawny, rather short; tips of the femora, tibiæ towards the tips, and tarsi, black.

Not rare. (E. S. I.)

14. **paludosa,** Meig. Zw. vi. 289. 50 (1830); Schumm.; Stæg.; Zett. *Cinerea,* thorace vittis quatuor nigris, *alis* subcinereis *parvis,* abdomine ferrugineo, pedibus fulvis validis, femoribus tibiisque apice tarsisque nigris. Long. 7–11; alar. 10–16 lin.

Cinereous. Proboscis tawny. Plalpi and antennæ tawny, black towards the tips. Thorax with four indistinct slender black stripes; metathorax and pectus whitish. *Wings short,* grey, with a slight lurid tinge, brown along the costa. Halteres testaceous; knobs tawny. Abdomen long, especially in the female, ferruginous. Legs tawny, stout, pubescent; femora and tibiæ with black tips; tarsi black, tawny towards the base.

Not common. (E. I.)

15. **oleracea,** L. F. S. 1740 (1761); F.; D. G.; Schr.; Gmel.; Latr.; Meig.; Mcq.; Zett.; Schumm.; Gimm.; Stæg.; Ross. (V.). *Cana,* thorace vittis quatuor fuscis, alis subcinereis ad costam luridis vitta subcostali limpida, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 7–10; alar. 14–20 lin.

Hoary. Proboscis tawny. Palpi brown. Antennæ black, tawny towards the base. Thorax with four indistinct brown stripes. Metathorax and pectus whitish. Wings slightly greyish, lurid along the costa, and with a limpid stripe behind it. Halteres testaceous, blackish at each end. Hind borders of the abdominal segments testaceous. Legs testaceous, pubescent; femora and tibiæ generally blackish at the tips; tarsi black, testaceous towards the base. *Male.* Abdomen testaceous at the tip. *Fem.* Abdomen tawny at the tip.

Generally distributed. (E. S. I.)

16. **flavolineata,** Meig. Zw. i. 185. 24 (1818); Mcq.; Stæg.;

Zett.—*juncea?* Hoffm.; Meig.—*longicornis*, Curt.! B. E. *Cinerea*, thorace vittis quatuor fuscis, alis subcinereis, stigmate fusco antice albo, *abdomine* nigro-cinereo basi subtusque lurido *maculis lateralibus flavis*, pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 7–12; alar. 16–20 lin.

Cinereous. Proboscis and palpi tawny. Antennæ black, testaceous towards the base. Thorax with four brown stripes, the outer pair short. Pectus and metathorax whitish. Wings greyish; stigma brown, whitish in front, a luteous tinge at the base and along the costa. Halteres testaceous, with blackish knobs, blackish-grey, lurid at the base and beneath, and partly so along each side, *hind borders of the segments towards the tips pale yellow.* Legs tawny; tarsi and tips of the femora and of the tibiæ black. *Male.* Antennæ nearly as long as the abdomen. *Fem.* Antennæ shorter than the thorax. Abdomen long, much compressed.

Rare. (E.)

17. **nodicornis?** Hoffm.; Meig. Zw. i. 185. 23 (1818); Schumm.; Stæg.; Ross. (V.); Zett.—*juncea*, Hoffm.; Meig. *Cana*, thorace vittis quatuor fuscis, alis subcinerascentibus macula apud stigma albida, *abdomine vitta dorsali lutea fasciisque posticis flavis*, pedibus fulvis, femoribus tibiis tarsisque apice nigris. Long. 6½; alar. 15 lin.

Hoary. Head whitish. Palpi dull testaceous. Antennæ brown, testaceous towards the base. Thorax with four brown stripes. Pectus and metathorax whitish. Wings very slightly greyish, testaceous along the costa, with a small whitish spot by the stigma, which is sometimes partly brown. Halteres testaceous, with darker knobs. *Abdomen with a luteous dorsal stripe; subapical segments with pale yellow hind borders;* tip tawny. Legs tawny; femora and tibiæ with black tips; tarsi ferruginous, black towards the tips.

Rare. (E.)

18. **nigra,** L. F. S. 1748 (1761); F.; Sehr.; Gmel.; Meig.; Mcq.; Schumm.; Stæg.; Ross. (V.); Zett.—*verticillata*, F. *Nigra* aut *ferruginea*, alis fuscis, stigmate nigro-fusco. Long. 5–6½; alar. 9 lin.

Black. Head dark ferruginous. Palpi ferruginous towards the base. First joint of the antennæ ferruginous; second tawny. Wings brown; stigma dark brown; veins black. Tibiæ ferruginous, black towards the tips; tarsi tawny towards the base. *Male.* Antennæ longer than the thorax. Legs rather long. *Fem.* Antennæ shorter than the thorax. Legs rather short.—Var. *Male and Fem. Ferruginous.* Tarsi black.

Rare. (E.)

19. **pruinosa,** Hoffm.; Meig. Zw. i. 191. 32 (1818); Mcq.; Schumm.; Gimm.; Stæg.; Zett. Albido-cana, palpis antennisque nigris, *thorace vittis tribus fuscis*, alis subfuscescentibus, stigmate fusco, abdomine vittis duabus fuscis, pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 6–7; alar. 11–13 lin.

Whitish-hoary. Palpi and antennæ black. *Thorax with three broad brown stripes.* Wings slightly brownish; stigma brown; veins black, tawny towards the base. Halteres tawny, with brownish knobs. Abdomen with a brown stripe along each side; tip ferruginous. Legs tawny, slender; tarsi and tips of the femora and of the tibiæ black. *Male.* Antennæ more than thrice the length of the proboscis. *Fem.* Antennæ more than twice the length of the proboscis.

Rare. In the British Museum. (E. I.)

20. **plumbea,** F. Sp. Ins. ii. 403. 15 (1781); Gmel.; Meig. Cana, *thorace vittis quatuor fuscis,* alis limpidis, venis cinereo-sublimbatis, pedibus nigris, femoribus basi testaceis; *Fœm.* alis abbreviatis, pedibus breviusculis validis. Long. 4–5; alar. 7–11 lin.

Hoary. Palpi and antennæ black. *Thorax with four brown stripes,* the outer pair short. Pectus and metathorax whitish. Wings limpid, slightly clouded with grey along the veins; veins black, pale testaceous at the base. Halteres testaceous, with black knobs. Legs black; femora testaceous towards the base. *Fem. Wings not extending beyond the tip of the abdomen. Legs short, stout.*

Abundant on the moors of the North of England in the spring. (E.)

21. **fimbriata?** Meig. Zw. i. 190. 31 (1818).—*fusca?* Stæg.; Zett. *Mas,* cana, *thoracis disco cinereo vittis tribus fuscis,* alis cinereis basi costaque luridis, *abdomine luteo vitta dorsali nigra* segmentorum marginibus posticis flavis, pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 6; alar. 15 lin.

Male. Hoary. Head beneath and palpi testaceous, the latter brown towards the tips. Antennæ black, testaceous at the base, full five times the length of the proboscis. *Disc of the thorax cinereous, with three brown stripes,* the lateral pair indistinct. Wings grey, lurid at the base and along the costa; no stigma; veins black, testaceous towards the base. Halteres testaceous. *Abdomen luteous, with a black stripe above and another beneath;* hind borders of the segments pale yellow. Legs tawny, long and slender; tarsi and tips of the femora and of the tibiæ black.

Rare. In the British Museum. (E.)

22. **dispar,** Hal. E. M. i. 155 (1833). Cinerea, *thorace vittis duabus fuscis,* alis subcinereis macula apud stigma albida, abdominis basi lateribusque luridis, femoribus basi testaceis; *Fœm. alis brevissimis.* Long. 5–6; alar. 12 lin.

Cinereous. Palpi and antennæ black. *Thorax with two brown stripes,* which taper hindward. Pectus and metathorax whitish. Wings greyish, with a small whitish spot by the stigma, which is pale brown. Halteres testaceous. Abdomen lurid at the base and along each side. Femora testaceous towards the base. *Fem. Wings rudimentary.*

Common on mountains and moors; more rare in cultivated lowlands. (E. I.)

23. **melanoceras,** Schumm. Tip. 75. 30 (1833). *Fœm.* cana, *antennis nigris, thorace vittis tribus fuscis* media lata macula laterali alba, alis limpidis, stigmate fusco, abdomine lurido vitta dorsali fusca, pedibus testaceis, femoribus tibiis tarsisque apice fuscis. Long. 7; alar. 12 lin.

Fem. Hoary. *Antennæ black,* very much shorter than the thorax. *Thorax with three brown stripes,* the middle one broad; the lateral pair short and slender; a white spot on each side. Wings limpid; veins brown, testaceous towards the base and along the costa; stigma small, brown. Halteres testaceous. Abdomen lurid, with a brown dorsal stripe. Legs testaceous, rather stout; tips of the femora, of the tibiæ, and of the tarsi, brown.

Very rare. In Mr. Haliday's collection. (I.)

24. **luteipennis,** Meig. Zw. vi. 288. 48 (1830); Schumm.; Stæg.; Zett. Cana, *antennis fuscis basi testaceis, thorace vittis quatuor dorsalibus fuscis duabusque lateralibus flavis,* alis subcinereis basi costaque luridis, stigmate flavo, abdomine nigricante vitta lutea marginibus subapicalibus flavis, pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 10–11; alar. 18–20 lin.

Hoary. Head beneath and palpi testaceous. *Antennæ brown, testaceous towards the base. Thorax with a yellow stripe on each side, and with four brown dorsal stripes.* Wings very slightly greyish, with a lurid tinge at the base and along the fore border; stigma yellow; veins black, tawny towards the base. Halteres testaceous, with brownish tips. Abdomen blackish, with a luteous stripe above and another beneath; hind borders of the segments towards the tip yellow; tip ferruginous. Legs tawny; tarsi towards the tips, and tips of the femora and of the tibiæ black. *Fem.* Antennæ rather more than twice the length of the proboscis.

Much resembles *T. flavolineata,* but the abdomen is shorter and less compressed, and the stigma is wholly yellow. Rare. (E. I.)

25. **lunata,** L. F. S. 1744 (1761); D. G.; Schr.; Gmel.; Latr.; Meig.; Mcq.; Schumm.; Stæg.; Zett. Cana, thorace vittis quatuor fuscis, alis subcinereis fascia obliqua alba, abdominis apice testaceo, pedibus nigris, femoribus tibiisque basi pallidis. Long. 6–7; alar. 14–15 lin.

Hoary. Palpi and antennæ black, the latter tawny towards the base in the male. Thorax with four brown stripes, the lateral pair short. Metathorax and pectus white. Wings slightly grey, with an oblique white band behind the stigma, which is brown. Halteres testaceous, with brown knobs. Abdomen testaceous at the tip. Legs

black; femora tawny, with black tips; tibiæ ferruginous towards the base.

Not rare. (E.)

26. **ochracea,** Meig. Zw. i. 186. 25 (1818); Mcq.; Zett.; Schumm.; Gimm.; Stæg.; Ross. (V.).—*lunata*, F. *Testacea*, alis subcinereis fascia obliqua alba, femoribus apice tarsisque fuscis. Long. 7–8; alar. 16 lin.

Testaceous. Palpi black towards the tips. Antennæ black, testaceous towards the base. Wings slightly greyish, with a short oblique white band by the stigma, which is brown. Halteres with brownish knobs. Abdomen occasionally with a greyish dorsal stripe; tip ferruginous. Tarsi and tips of the femora brown.

Common. (E. S. I.)

27. **Selene,** Meig. Zw. vi. 288. 49 (1830); Schumm.; Stæg.; Zett. *Cinerea, thorace vittis quatuor fuscis*, alis subcinereis fascia brevi alba, stigmate fusco, abdomine nigro-cinereo vittis lateralibus luridis, pedibus fulvis, femoribus tibiisque apice tarsisque nigris. Long. 11; alar. 22 lin.

Cinereous. Proboscis and palpi tawny. Antennæ black, testaceous towards the base. *Thorax with four brown stripes*, the outer pair short. Pectus and metathorax whitish. Wings greyish, with a short white band adjoining the stigma, which is brown. Halteres testaceous, with blackish knobs. Abdomen blackish-grey, with a lurid stripe extending along each side, and dilated towards the base. Legs tawny; tarsi and tips of the femora and of the tibiæ black.

Not common. (E.)

28. **fascipennis,** Hoffm.; Meig. Zw. i. 187. 26 (1818); Mcq.; Schumm.; Zett.; Gimm.; Stæg. *Albida*, capite fulvo, thoracis disco fusco, alis subcinereis fascia obliqua alba, abdomine lurido vitta dorsali apiceque piceis, pedibus nigris, femoribus basi testaceis. Long. 6–7; alar. 16 lin.

Brown. Head tawny. Palpi and antennæ black, the latter tawny at the base. *Sides of the thorax, metathorax, and pectus whitish.* Wings greyish, with a slight testaceous tinge along the costa, and with an oblique white band behind the stigma, which is whitish-testaceous, bordered with grey. Halteres testaceous, with brown knobs. Abdomen lurid; dorsal stripe and tip piceous. Legs black; femora testaceous, blackish towards the tips.

Not rare. (E. S. I.)

29. **Selenitica,** Hoffm.; Meig. Zw. i. 187. 27 (1818). *Ochracea, thorace vittis quatuor fuscis*, alis subcinereis fascia arcuata alba, stigmate flavo, abdomine vittis tribus fuscis, pedibus testaceis, tarsis nigricantibus. Long. 8; alar. 14 lin.

Fem. Ochraceous. Palpi hairy, black towards the tips. Antennæ brown, testaceous towards the base, about twice the length of the proboscis. *Thorax with four brown stripes.* Wings greyish, with a slight

luteous tinge at the base and in front, and with a short curved white band adjoining the stigma, which is yellow; veins testaceous. Halteres testaceous. Abdomen with three brown stripes; tip ferruginous. Legs testaceous; tarsi blackish, testaceous towards the base.

Rare. In the British Museum. (E.)

30. **vaga,** n. *Mas, pallide flava,* antennis nigris basi flavis, *thoracis disco nigro,* alis subcincreis fascia furcata albida, abdomine testaceo vitta dorsali nigro-cinerea segmentorum marginibus posticis flavis, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 6; alar. 12 lin.

Male. Pale yellow. Antennæ black, setaceous, shorter than the thorax, with very few and short hairs; first and second joints yellow; first brown towards the tip. *Disc of the thorax black.* Wings slightly greyish, with a whitish forked band by the small brown stigma; fore fork extending towards the tip of the wing; hind fork passing through the discal areolet nearly to the hind border of the wing; *veins* brown, *simple in front of the discal areolet.* Halteres with brown knobs. Abdomen testaceous, subobclavate, with a greyish-black dorsal stripe, which widens from the base to the tip; hind borders of the segments pale yellow. Legs testaceous, rather long and slender; tarsi and tips of the femora and of the tibiæ black.

Very rare. In the collection of the Rev. L. Jenyns. (E.)

31. **annulicornis,** Meig. Zw. vi. 289. 51 (1830). — *varicornis,* Schumm. Fulva, thoracis disco cinereo vittis quatuor fuscis; alis subfuscescentibus apud venas obscurioribus macula albida, abdomine fascia subapicali nigra, pedibus fulvis, femoribus tarsisque apice nigris. Long. 5–6; alar. 10–12 lin.

Tawny. Antennæ with a black band at the base of the fourth and of all the following joints. Disc of the thorax grey, with four brown stripes. Wings very slightly tinged with pale brown; some of the veins clouded with darker brown; a whitish diffuse spot behind the stigma, which is brown. Halteres testaceous. Abdomen with a black band near the tip. Legs pale tawny; tips of the femora and tarsi towards the tips black.

Not common. (E. S. I.)

All the following species of *Tipula* belong to the genus *Pachyrhina* of Meigen, which may be thus characterized:—

PACHYRHINA, Mcq.; Stæg.; Ross. (V.); Zett. D. S. *Tipula* p., L.; F.; Gmel.; Scop.; Meig.; Zett. I. L.; Schumm.; Gimm.

Corpus magnum, elongatum, cylindricum, glabriculum. Caput parvum, rotundatum. Frons antice prominula. Oculi remoti. Proboscis longiuscula, crassa, cylindrica, apice superne acuta. Palpi 4-articulati, incurvi, subcylindrici; articuli primus, secundus, et tertius subæquales; quartus longior et paullo angustior. Antennæ 13-articu-

latæ, porrectæ, simplices, pilosæ, subfiliformes, extrorsum subsetaceæ, deorsum arcuatæ; articulus primus subobconicus; secundus brevissimus, cyathiformis; tertius et sequentes cylindrici, versus apicem sensim angustiores. Prothorax distinctus. Thorax ellipticus. Scutellum parvum. Metathorax subconvexus. Alæ lanceolatæ, divaricatæ, basi angustæ, apice rotundatæ. Abdomen segmentis octo, elongatum, cylindricum. Pedes longi, graciles, nudiusculi, inermes; coxæ breves; tibiæ calcaribus brevibus; ungues parvi. *Mas.* Antennæ thorace vix breviores. Anus obtusus, subclavatus, appendiculatus. *Fœm.* Antennæ thorace paullo breviores. Anus acutus, stylis duobus subulatis rectis, plerumque elongatis.

Body large, long, slender, cylindrical, nearly smooth. Head small, rounded, slightly attenuated behind; front rather prominent. Eyes remote. Proboscis thick, cylindrical, acute at the tip above. Palpi four-jointed; first, second, and third joints nearly equal; fourth longer and more slender. Antennæ thirteen-jointed, porrect, simple, pilose, nearly filiform, setaceous towards the tips; first joint somewhat obconical; second cyathiform, very short; the rest cylindrical, more slender towards the tips. Prothorax distinct. Scutellum small. Metathorax slightly convex. Wings lanceolate, divaricate, narrow at the base, rounded at the tips; subcostal vein approaching the costa at the stigma, then receding from it, and joining it at four-fifths of the length, connected with the radial by a short veinlet adjoining the stigma; radial and cubital springing from a common petiole, which is about one-fourth of their length, and proceeds from the subcostal at two-thirds of the length; cubital forked very near its base; its hind fork forming an angle near the base, and there connected by a transverse veinlet with the third externo-medial; the middle of this veinlet emits the second externo-medial, and the latter is connected with the cubital by another veinlet, which forms an angle in front, and then emits the first externo-medial; third externo-medial angular at its junction with the veinlet, which is continued across it to the subanal; anal and axillary complete; discal areolet pentagonal. Abdomen long, cylindrical, with eight segments. Legs long, slender, unarmed, nearly bare; coxæ short; tibiæ with two short spurs; ungues small. *Male.* Antennæ hardly shorter than the thorax. Abdomen at the tip obtuse, subclavate, with various appendages. *Fem.* Antennæ a little shorter than the thorax. Tip of the abdomen acute, with two subulate straight generally elongated styles.

32. **cornicina,** L. F. S. 1747 (1761); F.; Schr.; Gmel.; Meig.; Meq.; Stæg.; Zett.—*sannio*, Meig.—*iridicolor*, Schumm. Flava, capite macula fusca, antennis fuscis basi flavis, thorace vittis tribus nigris, *alis limpidis*, stigmate fusco, abdomine testaceo vittis tribus fuscis, pedibus testaceis, femoribus tibiisque apice tarsisque nigricantibus. Long. 6; alar. 11 lin.

Yellow. Head with a brown spot behind. Antennæ brown, yellow

at the base. Thorax with three black stripes; the middle pair short. Pectus and sides of the thorax pale yellow, with a few black spots; metathorax with a brown stripe. *Wings limpid;* stigma brown; veins between the stigma and the hind border slightly clouded with brown. Halteres yellow. Abdomen testaceous, with three brown stripes; the dorsal stripe moderately broad; the lateral stripes narrow. Legs testaceous; tarsi and tips of the femora and of the tibiæ blackish.

Generally distributed. (E. S. I.)

33. **quadrifaria,** Meig. Zw. i. 199. 43 (1818); Schumm.; Curt. Flava, capite macula nigra, antennis nigris basi testaceis, thorace vittis tribus nigris, *alis sublimpidis fascia fusca,* stigmate nigro-fusco, abdomine vitta nigra, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 5½–6; alar. 12 lin.

Yellow. Head luteous, with a triangular black spot behind. Proboscis brownish above. Antennæ black, testaceous towards the base. Thorax with three broad black stripes; the lateral pair including two yellow spots; metathorax with three black stripes. Pectus with black spots. *Wings nearly limpid, with a more or less conspicuous brown band* behind the stigma, which is dark brown; tips generally greyish. Halteres testaceous, or brown. Abdomen with a black dorsal stripe. Legs testaceous; tarsi and tips of the femora and of the tibiæ black. *Male.* Dorsal stripe of the abdomen interrupted on the fore border of each segment. *Fem.* Dorsal stripe of the abdomen dilated on the hind border of each segment.

Not rare. (E.)

34. **scurra,** Hoffm.; Meig. Zw. i. 198. 41 (1818); Mcq.; Zett.; Schumm.; Stæg.; Ross. (V.). Luteo-flava, capite macula nigra, thorace vittis tribus nigris, alis subluridis, stigmate pallide fusco, abdomine vitta nigra, pedibus luteis, femoribus tibiisque apice tarsisque nigris. Long. 5–6; alar. 10–11 lin.

Luteous-yellow. Head with a triangular black spot behind. Proboscis with a black stripe above. Palpi and antennæ black, the latter luteous at the base. Thorax with three black stripes, the lateral pair short; sides and pectus with black spots. Wings slightly lurid; stigma very pale brown. Halteres yellowish. Abdomen with a black stripe above and below, interrupted in the female. Legs luteous; tarsi and tips of the femora and of the tibiæ black.

This species closely resembles *P. pratensis,* but may be distinguished by its deeper colour, the different form of the stripes and spots of the thorax, and the lurid tinge of the wings. Not common. (E. I.)

35. **flavescens,** L.; F. E. S. iv. 237. 13 (1792); Meig.; Mcq.; Schumm.; Stæg.; Ross. (V.).—*flavo-maculata,* D. G.—*lineata,* Schr.—*maculosa,* Zett. I. L. Flava, capite macula nigra, palpis antennisque nigris, thorace vittis tribus nigris, alis subcinereis, stigmate pallide

fusco, abdomine luteo fascia interrupta maculisque lateralibus nigris, pedibus nigris, femoribus basi fulvis. Long. 4½–6; alar. 9–11 lin.

Yellow. Head luteous, with a black triangular spot behind, *and a black dot on each side.* Proboscis with a black stripe above. Palpi and antennæ black. Thorax with three black stripes, the lateral pair short; sides and pectus with black spots. Wings greyish, narrower than those of *P. pratensis,* with a testaceous tinge along the costa; stigma pale brown. Halteres testaceous, with blackish knobs. Abdomen luteous, with an interrupted black stripe; a row of black spots along each side. Legs black; femora tawny, black towards the tips.

Common. (E. S. I.)

36. **imperialis,** Meg.; Meig. Zw. i. 196. 39 (1818); Meq.; Schumm.; Stæg.; Zett.—*scalaris,* Hoffm.; Meig.; Ross. (V.). *Flava,* capite luteo striga nigra, antennis nigris basi pallidis, thorace vittis tribus nigris, *alis sublimpidis,* abdomine vitta dorsali interrupta nigra, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. 8–9; alar. 14–15 lin.

Yellow. Head luteous, with a black streak behind. Proboscis and palpi testaceous. Antennæ black, luteous, or yellow at the base. Thorax with three broad black stripes, the middle one in advance; scutellum brown. Metathorax with a brown stripe, and sometimes with a brown spot, on each side. *Wings nearly limpid;* stigma dark brown; veins black, testaceous at the base. Halteres testaceous; club partly brown. Abdomen with a black dorsal stripe, which is generally interrupted on the fore border of each segment. Legs testaceous, long, slender; tarsi, except towards the base, and tips of the femora and of the tibiæ, black.

Not rare. (E. S. I.)

37. **crocata,** L. F. S. 1739 (1761); F.; Gmel.; Meig.; Meq.; Gimm.; Zett.; Schumm.; Stæg.; Ross. (V.).—*flavo-fasciata,* D. G. *Atra,* macula verticis, thoracis fascia antica maculisque lateralibus flavis, alis cinereis fusco-nebulosis, stigmate nigro, abdomine fasciis tribus luteis, femoribus basi fulvis. Long. 10; alar. 12 lin.

Deep black. Head with a luteous spot on the vertex. Thorax with a short yellow band in front, and with luteous spots along each side. *Wings grey, more or less clouded with brown;* stigma black. Halteres piceous. Abdomen with three luteous bands; femora tawny towards the base.

Not common. (E. I.)

Genus XVI. **CTENOPHORA.**

CTENOPHORA, F. S. A. 17 (1805); Meig.; Curt.; Meq.; Zett.; Gimm. *Tipula* p., L.; Schr.; F. E. S.; Gmel. *Tanyptera,* Latr. *Dictenidia* et *Xiphura,* Brullé.

Corpus magnum, oblongum, robustum, glabriculum, sæpissime nitidum.

Caput transversum. Oculi rotundi, remoti. Rostrum breviusculum, crassum, antice superne acuminatum. Palpi 4-articulati, cylindrici, incurvi, pubescentes; articulus primus brevior; secundus et tertius æquales, subclavati; quartus longissimus, angustior. Antennæ 13-articulatæ, porrectæ; articulus primus subcylindricus; secundus parvus globosus aut brevi-cyathiformis; tertius oblongus, interdum difformis; tredecimus minor, simplex. Prothorax distinctus, elevatus. Thorax convexus. Alæ mediocres, divaricatæ. Abdomen segmentis octo, crassiusculum. Pedes modice longi, validi, inermes; coxæ breves; tibiæ apice bicalcaratæ. *Mas.* Antennæ pectinatæ, thorace vix breviores. Abdomen cylindricum; anus elevatus, clavatus, varie appendiculatus. *Fœm.* Antennæ simplices, breviores. Abdomen lanceolatum vel fusiforme, ano plerumque elongato, stylis 2, subensiformibus.

Body large, oblong, robust, nearly smooth, generally shining. Head transverse. Eyes round, remote. Proboscis thick, rather short, pointed above in front. Palpi four-jointed, cylindrical, curved, decumbent, pubescent; second and third joints of equal length, subclavate, longer than the first; fourth very long, more slender. Antennæ thirteen-jointed, porrect; first joint nearly cylindrical; second small, globose or short-cyathiform; third oblong, occasionally distorted; thirteenth smaller than the others. Prothorax distinct, elevated. Thorax convex, elongate-oval. Wings moderately broad, divaricate, lanceolate; mediastinal vein ending in a transverse veinlet by the stigma at a little beyond two-thirds of the length of the wing; subcostal ending at five-sixths of the length, connected by a veinlet at the tip of the stigma with the radial; radial and cubital springing from a common petiole, which they much exceed in length, and which proceeds from the subcostal at half the length of the wing; cubital forming near its base an angle, which emits to the third externo-medial a transverse veinlet; this also forms an angle whence proceeds the first externo-medial; the latter is forked at half its length or before, and near its fork is connected again with the third externo-medial by an oblique veinlet whose middle emits the second externo-medial; another oblique veinlet connects the third externo-medial with the subanal; anal and axillary veins complete; discal arcolet pentagonal. Abdomen with eight segments, rather thick. Legs moderately long, stout, unarmed; coxæ short; tibiæ with two spurs at the tips. *Male.* Antennæ pectinated, hardly shorter than the thorax; tip elevated, clavate, and with various appendages. *Fem.* Antennæ simple, shorter than those of the male. Abdomen lanceolate, or fusiform, generally elongated and attenuated towards the tip, with two subensiform styles.

The *Ctenophoræ* inhabit woods; they excel the other *Tipulidæ* in their robust structure, their bright colours, and in the rapidity of their flight. The larvæ feed in decayed trees.

a. Male. Antennæ with alternate long and short branches; the long branches not much longer than the short ones. *Fem.* Antennæ not

much longer than the head. Abdomen compressed and slightly attenuated towards the tip.—*Dictenidia*, Brullé. Species 1.

a a. Male. Antennæ with alternate long and short branches; the short branches hardly more than half the length of the long ones. *Fem.* Antennæ much longer than the head; joints, except the first, nearly globose. Abdomen nearly linear, compressed at the tip, hardly attenuated. Species 2.

a a a. Male. Antennæ with alternate long and short branches; the former much longer than the latter. *Fem.* Antennæ little longer than the head; joints transverse; third joint much dilated. Abdomen fusiform, acuminated at the tip, but not compressed or attenuated. Species 3, 4.

a a a a. Fem. Antennæ as long as the thorax; joints most cylindrical, successively decreasing in length from the third to the twelfth; third very long. Abdomen fusiform for half the length from the base, from thence to the tip falciform, and much compressed and attenuated. Species 5, 6.

1. **bimaculata,** L. F. S. 1750 (1761); D. G.; F.; Gmel.; Meig.; Mcq.; Brullé; Zett.; Gimm.; Stæg.; Ross. (V.). Nigra, thorace vittis quatuor pedibusque fulvis, alis subcinereis fusco-bimaculatis, femoribus tibiisque apice tarsisque fulvis. Long. 5–6; alar. 9–10 lin.

Black, shining. Proboscis ferruginous. Palpi testaceous, black towards the tips. Thorax tawny along each side, and with two tawny dorsal stripes. Wings nearly limpid, with a brown spot at the tip of the subcostal areolet, and with another at the tip of the wing; transverse veinlets clouded with brown. Halteres tawny, with piceous knobs. Hind borders of the abdominal segments ferruginous. Legs luteous; tarsi and tips of the femora and of the tibiæ piceous.

Not rare. (E.)

2. **pectinicornis,** L. F. S. 1735 (1761); F.; Schr.; Gmel.; Latr.; Meig.; Curt.; Mcq.; Zett.; Stæg.; Ross. (V.).—*nigro-crocea*, D. G.—*variegata*, F.; Meig. Kl. Nigra, thorace vittis duabus flavis, alis subcinereis macula costali fusca, abdomine fulvo, vitta dorsali apiceque nigris, pedibus fulvis, femoribus tibiisque apice tarsisque nigris; *Fœm.* abdomine maculis lateralibus flavis. Long. 7–11; alar. 11–15 lin.

Black, shining. Proboscis tawny on each side. Palpi tawny, black towards the tips. Antennæ tawny at the base. Thorax yellow in front, and with a yellow stripe on each side. Wings slightly greyish, with a brown spot at the tip of the subcostal vein. Halteres testaceous. Abdomen tawny; dorsal stripe and tip black. Legs tawny; femora and tibiæ with blackish tips; tarsi black. *Fem.* Abdomen with a row of yellow spots along each side; the black dorsal stripe sometimes extending over the whole surface except at the base.

Not rare. Occurs near London, and as far west as the banks of the Wye, near Chepstow. In a pupa supposed to belong to

this species the six leg-cases are of the same length, exactly parallel and adjacent, and being annulated, have the appearance of tracheæ. The abdomen is armed with several strong conical spines, pointing mostly towards the tail: these spines assist in pushing the pupa out of the tree.

3. **flaveolata,** F. E. S. iv. 234. 6 (1792); Latr.; Meig.; Curt.; Mcq.; Gimm.; Stæg.; Ross. (V.). — *crocata,* Schr. *Nigra, thorace vittis duabus flavis,* alis subflavescentibus macula costali fusca, *abdominis segmentis flavo-fasciatis,* pedibus luteis, tarsis nigris. Long. 9; alar. 15 lin.

Black. Mouth tawny above. Palpi tawny towards the base. Antennæ tawny, brownish about the middle part. *Thorax* yellow in front, and *with a yellow stripe on each side,* and behind the wings with a whitish line on each side. Wings slightly yellowish, with a brown spot at the tip of the subcostal vein, and from thence to the tips with a slight brownish tinge along the costa. Halteres tawny. *Abdomen* yellow at the base, and *with a yellow band on the hind border of each segment;* tip ferruginous. Legs luteous; tarsi black, tawny towards the base.

Rare. (E.)

4. **ornata,** Meg.; Meig. Zw. i. 166. 10 (1818); Curt.! B. E. i. 5. *Flava* luteo varia, antennis pedibusque luteis, *thoracis disco nigro* fascia lutea, alis hyalinis apud costam fulvis, macula subapicali nigra, *abdomine basi apiceque fasciis maculaque intermedia trigona nigris,* tarsis nigris. Long. 8; alar. 16 lin.

Yellow, partly luteous. Antennæ and legs luteous. *Disc of the thorax black,* with the exception of a luteous band behind the middle. Wings hyaline, tawny along the costa, with a large costal subapical black spot. *Abdomen with a black band on each segment, with the exception of the middle part, which contains a triangular black spot.* Tarsi black.

Very rare. In Mr. Dale's collection. (E.)

5. **atrata,** L. F. S. 1749 (1761); F.; Schr.; Gmel.; Latr.; Meig.; Mcq.; Curt.; Zett.; Gimm.; Ross. (V.).—*ichneumonea,* D. G.; Latr.—*Villantiana,* Brullé. — *ruficornis,* Stæg. Nigra, *antennis* pedibusque *fulvis,* alis subluridis, abdomine basi luteo, tarsis piceis. Long. 10–12; alar. 13–15 lin.

Black, shining. *Antennæ tawny,* black at the base, brown towards the tips; fourth, fifth, sixth, and seventh joints white at the base. Wings with a slight lurid tinge; a brown spot at the tip of the subcostal vein. Halteres piceous. Abdomen luteous towards the base. Legs tawny; tarsi piceous, black towards the tips.

Not common. (E. S.)

6. **nigricornis,** Meig. Zw. i. 159. 4 (1818); Mcq.; Curt.; Zett. —*atrata,* Meig. Kl. Nigra, *antennis nigris,* alis subcinereis, abdomine

basi pedibusque luteis, femoribus tibiisque apice tarsisque nigris. Long. 6–7; alar. 8–10 lin.

Black, shining. *Antennæ black.* Wings slightly greyish, slightly testaceous at the base, with a brown spot at the tip of the subcostal vein. Halteres ferruginous. Abdomen luteous towards the base. Legs luteous; tarsi and tips of the femora and of the tibiæ black.

Not common. (E. S.)

Genus XVII. **PTYCHOPTERA.**

PTYCHOPTERA, F. S. A. 20 (1805); Meig.; Meq.; Zett.; Gimm.; Stæg. *Tipula* p., L.; F. E. S.; Scop.; Schr.; Gmel.; Latr.

Corpus magnum aut mediocre, elongatum, nitidum, glabriculum. Caput sessile. Oculi rotundi, remoti. Proboscis exserta, capitulo magno carnoso. Palpi 4-articulati, elongati, filiformes, incurvi, pilosuli; articulus primus brevis; secundus et tertius paullo longiores, æquales; quartus longissimus, setaceus. Antennæ 16-articulatæ, porrectæ, filiformes, pilosulæ; articulus primus brevis, crassiusculus, cylindricus; secundus brevissimus, cyathiformis; tertius longissimus, filiformis; quartus et sequentes oblongi; sextus-decimus minor. Prothorax indistinctus. Thorax ovatus, supra convexus, striatus, antice nonnihil prominulus. Scutellum parvum. Metathorax convexiusculus, sat magnus. Alæ divaricatæ, modice latæ, abdominis longitudine. Abdomen segmentis octo, basi angustatum. Pedes mediocres, subpubescentes, inermes; coxæ modice longæ; femora apices versus leniter crassiora; tibiæ apice calcaratæ. *Mas.* Antennæ thorace paullo longiores. Abdomen apicem versus paullo incrassatum; anus modice crassus, breviusculus, parum reflexus, appendiculis 4 magis exsertis subclavatis munitus. *Fœm.* Antennæ thorace paullo breviores. Abdomen apicem versus distincte incrassatum; apex acutus, stylis analibus 2 modice longis, ensiformibus, parallelis, leniter incurvis.

Body large or of moderate size, elongated, shining, nearly bare. Head sessile, transverse. Eyes round, remote. Rostrum rather short, slightly acute above in front. Proboscis prominent, with a large fleshy head. Palpi four-jointed, elongated, filiform, curved downward, somewhat pilose; first joint short; second and third rather longer, of equal length; fourth very long, setaceous. Antennæ sixteen-jointed, porrect, filiform, slightly pilose; first joint short, cylindrical, rather thick; second cyathiform, very short; third filiform, very long; fourth and following joints oblong; sixteenth smaller. Prothorax indistinct. Thorax oval, convex, striated, slightly prominent in front. Scutellum small. Metathorax rather large, slightly convex. Wings divaricate, moderately broad, as long as the abdomen. Mediastinal vein ending at a little beyond two-thirds of the length of the wing; subcostal ending at five-sixths of the length, connected with the radial by a very short

veinlet close to its tip; radial and cubital springing from a common petiole, which is about one-sixth of their length, and proceeds from the subcostal at half the length of the wing, and is connected with the externo-medial by a transverse veinlet at a little before its fork; cubital forked at half its length; externo-medial forked near its tip, connected with the subanal by a transverse veinlet, whose angle emits another externo-medial; subanal undulating beyond its junction with the externo-medial; anal curved near its tip towards the hind border; axillary rudimental; no discal areolet; a streak or spurious longitudinal vein at a little in front of the externo-medial. Abdomen with eight segments, narrow at the base. Legs of moderate length, slightly pubescent, unarmed; coxæ moderately long; femora rather thicker towards their tips; tibiæ with spurs at their tips. *Male.* Antennæ a little longer than the thorax. Abdomen slightly incrassated towards the tip; anus moderately thick, rather short, hardly reflexed, furnished with four subclavate appendages. *Fem.* Antennæ a little shorter than the thorax. Abdomen distinctly incrassated towards the tip, which is acute; two anal, ensiform, parallel, slightly curved, moderately long styles. Larva aquatic, vermiform, very long, much narrower at the tip of the abdomen, which is terminated by a very long and delicate tube, serving to convey the air to two tracheæ, which extend through the entire length of the body. The pupa on the contrary has the head furnished with a very long thread-like appendage, which has the same office as the anal tube of the larva; its abdomen is terminated by four small points.

These flies inhabit aquatic plants on ditches, and on the banks of ponds, from the spring to the autumn.

a. Hind tarsi white. Species 1.
a a. Hind tarsi not white.
  b. Wings spotted.
    c. Abdomen with tawny spots or bands. Species 2, 3.
    c c. Abdomen wholly black, except at the tip. Species 4.
  b b. Wings not spotted. Species 5.

1. **albimana,** F. E. S. iv. 239. 24 (1792); Gmel.; Meig.; Meq.; Stæg.; Ross. (V.); Zett. Nigra, scutello abdominisque maculis aut fasciis fulvis, alis subcinereis fusco-subfasciatis, pedibus testaceis, femoribus tibiisque apice tarsisque nigris, tarsis posticis albis. Long. 4–6; alar. 8–12 lin.

Black. Proboscis and palpi tawny. Thorax with a tawny suture between the wings. Scutellum tawny. Wings slightly greyish; transverse veinlets in the disc of the wing, and apical forks at their base clouded with brown. Halteres testaceous. Abdomen with two tawny spots on each side; these spots vary in size and distinctness, and are sometimes united in the male; tip tawny. Legs testaceous; tarsi and tips of the femora and of the tibiæ black; tibiæ darker than the femora; hind tarsi white, with black tips.

Generally distributed. (E. S. I.)

2. **contaminata,** L. F. S. 432. 1743 (1761); F.; Schr.; Gmel.; Latr.; Meig.; Mcq.; Zett.; Gimm.; Stæg.; Ross. (V.). Nigra, scutello pedibusque fulvis, *alis* subcinereis *fasciis tribus maculisque duabus fuscis,* femoribus tibiisque apice tarsisque nigris; *Mas, abdomine maculis duabus lateralibus fasciaque fulvis; Fœm.* abdomine maculis quatuor lateralibus fulvis. Long. $3\frac{1}{2}$–4; alar. 7–8 lin.

Black, shining. Proboscis, palpi, and scutellum tawny. *Wings* slightly greyish, *with three brown bands;* the first near the base, abbreviated hindward; second nearly reaching the hind border; third interrupted; *a brown spot on the base of the petiole of the radial and cubital veins, and a brown dot on the tip of the mediastinal vein.* Halteres testaceous. Abdomen tawny at the tip. Legs tawny; tarsi towards the tips, and tips of the femora and of the tibiæ black. *Male. Abdomen with a tawny spot on each side, and with a tawny band nearer the tip. Fem.* Abdomen with two tawny spots on each side.

Generally distributed. (E. S. I.)

3. **lacustris,** Meig. Zw. vi. 291. 5 (1830); Mcq.; Stæg.; Ross. (V.); Zett. Nigra, scutello fulvo, *alis* subcinereis *fasciis tribus fuscis,* pedibus testaceis, femoribus tibiisque apice tarsisque nigris; *Mas, abdomine fasciis duabus fulvis; Fœm.* abdomine maculis quatuor lateralibus fulvis. Long. $3\frac{1}{2}$; alar. 7 lin.

Black. Proboscis and palpi testaceous. Thorax with a tawny suture between the wings. Scutellum generally tawny. *Wings* slightly greyish, *with three brownish bands; the first near the base, apparent only by the costa; the second and third more complete than those of* P. contaminata. Halteres testaceous. Abdomen tawny at the tip. Legs testaceous; tarsi and tips of the femora and of the tibiæ black, the former dull testaceous towards the base. *Male. Abdomen with two tawny bands. Fem.* Abdomen with four lateral tawny spots.

Not rare. (E. S.)

4. **fasciata,** Scop. Ent. Carn. 321. 855 (1763).—*paludosa,* Meig.; Mcq.; Gimm.; Stæg.; Ross. (V.); Zett. Nigra, alis subcinereis fasciis tribus maculaque fuscis, pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. $3\frac{1}{2}$–4; alar. 7–8 lin.

Black, shining. Proboscis and palpi testaceous. Wings slightly greyish, with three brown bands; first and second abbreviated hindward; third interrupted; a brown spot on the tip of the mediastinal vein. Halteres testaceous. Legs testaceous; tarsi towards the tips, and tips of the femora, and of the tibiæ, black. *Male.* Abdominal appendages testaceous. *Fem.* Abdomen tawny at the tip.

Not rare. (E. S. I.)

5. **scutellaris,** Hoffm.; Meig. Zw. i. 206. 2 (1818); Zett.; Gimm.; Stæg. — *nigra,* F. Nigra, scutello fulvo, alis subcinereis,

pedibus testaceis, femoribus tibiisque apice tarsisque nigris. Long. $3\frac{1}{2}$–4; alar. 7–8 lin.

Black. Proboscis and palpi tawny. Thorax with a tawny suture between the wings. Scutellum tawny. Wings slightly greyish. Halteres testaceous. Abdomen testaceous at the tip. Legs testaceous; tarsi, except at the base, and tips of the femora and of the tibiæ, black.

Perhaps a variety of *P. fasciata*. Rare. (E.)

Family XI. RHYPHIDÆ.

Ocelli tres. Mesothoracis scutum integrum. Alæ sat latæ; areola discalis completa.

Ocelli three. Scutum of the mesonotum undivided. Wings and halteres developed. Discal areolet complete.

Genus I. **RHYPHUS.**

Rhyphus, Latr. Hist. Nat. Ins. xiv. 291 (1802); Meig.; Lam.; Meq.; Curt.; Gimm.; Blanch. *Musca* p., L.; Gmel. *Tipula* p., F. Sp. Ins.; Scop. *Rhagio* p., F. Mant. Ins.; Meig. Kl. *Sciara* p., F. Syst. Antl. *Anisopus*, Meig. Kl. Zw.

Corpus subcylindricum, sat gracile, non elongatum. Caput subrotundum. Labium elongatum, subcylindricum. Labrum lanceolatum. Lingua setiformis. Palpi 4-articulati, porrecti, compressi, pubescentes. Antennæ 16-articulatæ, submoniliformes, pubescentes, thorace paullo breviores. Thorax ellipticus. Alæ sat longæ latæque. Abdomen cylindricum, segmentis septem, thorace duplo longius. Pedes graciles, vix elongati; tibiæ posticæ calcaribus minimis apicalibus. *Mas.* Oculi supra connexi. *Fœm.* Oculi disjuncti.

Body subcylindrical, rather slender, not long. Head nearly round. Ocelli three, in a triangle on the vertex. Labium fleshy, elongate, subcylindrical, with two elliptical hairy lobes. Labrum lanceolate. Lingua setiform. Palpi four-jointed, porrect, compressed, pubescent; first joint subcylindrical; second broad, clavate, more than twice the length of the first; third and fourth slender; third not half the length of the fourth, which is about as long as the second. Antennæ sixteen-jointed, submoniliform, pubescent, rather shorter than the thorax; first joint longer than the others; the latter joints slightly attenuated. Thorax elliptical. Wings moderately long, and broad; subcostal vein ending at before two-thirds of the length of the wing; radial emerging from the subcostal at beyond half its length, ending at before three-fourths of the length of the wing, near which it is undulating; cubital forming a fork of the radial, and ending at very little in front of the

tip of the wing; subapical ending at a little behind the tip; præbrachial and pobrachial forked, the hind fork of the latter forming the subanal; anal complete; subaxillary nearly reaching the border. Areolets sixteen,—the humeral, the radical, the subcostal, two radial, the cubital, the præbrachial, the pobrachial, which is shorter than the præbrachial, the discal, four externo-medial, the anal, the axillary, and the subaxillary. Posterior margin much excavated at the base. Halteres moderately long. Abdomen cylindrical, with seven segments, about twice the length of the thorax. Legs slender, moderately long; hind tibiæ with very minute apical spurs. *Male.* Eyes connected above. *Fem.* Eyes with a space between them.

The *Rhyphi*, like most other *Nemocera*, are gregarious in their aerial flight, and pair in the air. They feed on over-ripe fruit and on other vegetable substances. The larva inhabits dung; it is cylindrical and very long; the mouth contains two tentacular mandibles, and the tip of the abdomen has four short, very small, obtuse tubercles.

1. **nigricans,** L. F. S. 553. 2310 (1761); Blanch.—*fuscatus*, F.; Gmel.; Meig.; Meq.; Gimm.—*fuscus*, Meig. Kl. *Cinereus*, antennis nigris, thorace vittis tribus nigris subcinereis *antice fusco maculatis*, abdomine vitta dorsali nigra suturis luridis, pedibus testaceis, femoribus tibiis tarsisque apice nigris. Long. 3–4; alar. 6–8 lin.

Grey. Antennæ black. Thorax with three broad black stripes. *Wings* greyish, *with brown spots in front, none at the tip;* veins black, testaceous at the base. Halteres testaceous. Abdomen with a black dorsal stripe; hind borders of the segments lurid. Legs testaceous; tips of the femora, of the tibiæ, and of the tarsi, black.

Generally distributed; pairs in the autumn. (E. S. I.)

2. **cinctus,** F. Sp. Ins. ii. 407. 41 (1781); Gmel.—*annulata*, L. —*fenestralis*, Scop.; Latr.; Meig.; Lam.; Curt. ! B. E. 102; Meq.; Guér.; Gimm.—*nebulosus*, Meig. Kl.—*ochraceus*, Curt. *Testaceus*, capite antennisque nigris, thorace vittis tribus nigris, *alis* subcinereis *maculis anticis unaque apicali fuscis*, abdomine lurido fasciis nigricantibus, pedibus testaceis, femoribus tibiis tarsisque apice nigris. Long. 3–4; alar. 6–8 lin.

Testaceous. Head and antennæ black. Thorax with three black stripes. *Wings* greyish, *with brown spots in front, and with one brown spot in front of each tip;* veins black, testaceous towards the base. Halteres testaceous. Abdomen lurid, with blackish bands. Legs testaceous; tips of the femora, of the tibiæ, and of the tarsi, black.

Generally distributed; frequents windows. (E. S. I.)

ERRATA.

VOLUME IV.

Page. Line.

12. 17. *for* rara *read* vara.
18. 38. Sp. 24. *sciarina* is a *Leja*.
25. Sp. 1. *valida* is *Leja brevicornis*, q. v.
26. 16. add *Boletina* p., Stg.; Ztt.
26. 33. *read* 1. anomala, Stg. d. d. 238. 9 (1840); Ztt.
29. 9. *read* 6. sciarina, Mg. Zw. vi. 300. 40 (1830); Stn.; Stg.; Ztt.
30. 1. *read* 8. bifasciata, Gmtl. Bull. Mosq. xix. iii. 56. 3 (1846).—*trimaeulata*, Mq. l. l.?
31. 27. *read* 13. brevicornis, Ztt. d. sc. xi. 4147. 6 (1852).
62. 6. *read* 1. halterata, Ztt. d. sc. xi. 4351 (1852).
63. 14. add *Plesiastina*, Winn.
64. 9. *read* 2. annulata, Mg. Zw. vi. 294. 3 (1830); Stg.; Ztt.; Winn.—*ferruginea*, Wlk.—*flavus* (*Ceroplatus*), Ztt.
99. *for* elegans (nomen bis lectum) *read* concinna.
100. *for* terminalis (nomen bis lectum) *read* finalis.
102. *for* concolor (nomen bis lectum) *read* discalis.
108. *for* mœsta (nomen bis lectum) *read* sobria.
112. *for* arcuata (nomen bis lectum) *read* flexa.
142. 18, 19. These two lines are misplaced; they belong to the character of the male.
145. 29. *read* 1. berolinensis, Mg. Zw. i. 319. 1 (1818); Mq.; Zlr.; Lw.; Ztt.
149. 24. "Metathorax produced, etc." should be part of the character of section *b*.
162. *for* testaceus *read* incertus; *see* page 182.
162. *for* rufovittatus *read* tritus; *see* page 155.
171. *for* littorellus *read* separatus; *see* page 174.
253. 31. *for* lancet-like *read* obsolete.
254. 3. *dele* a double cubital.
254. 31. for *eanescens* read *palustris*.
254. 42. *for* obovatæ *read* ovato-lanceolatæ.
255. 6. *for* obovate *read* ovate-lanceolate.
256. 13. *for* rise *read* run.
261. 7. *dele* Wings tense.
261. 31. *dele* with a complete discal areolet.
264. 22. *for* setaceous, shorter, *read* longer.
269. Table. The bracket which embraces the lowermost five genera should include only the last three; the others should be embraced by the bracket directly above that one.
269. Glochina, *Meig.*, to this group belong the species 32 and 40.
293. *for* xanthoptera, etc., *read* bifasciata, Schr. Ins. Austr. 428. 865.—*aurea?* Müll. Fn. Fr. 690; Prod. 1966.—*xanthoptera*, Meig. etc.
303. 18. dele *sexguttata*, Hal.
305. *dele* diuturna, etc.; *see* page 276.
312. maculata, etc., add *punctata?* Schr.; Müll.?
327. 37. *read* 22. pagana, Mg. zw. i. 184. 22 (1818); Mq.; Ztt. d. sc.—*plicata*, Mg. kl.—*dispar*, Hal.—*luridiventris*, Ztt. lap.—On the authority of Count Osten-Sacken, communicated by Winnertz.

VOLUME I.

Page. Line.

8. *dele* , *after* proportion.
103. 31. *dele* scarcely.
107. 11. *for* $2\frac{1}{2}$; alar. 5, *read* $1\frac{1}{2}$; alar. 3.
111. 27. *for* $1\frac{3}{4}$ *read* $2\frac{3}{4}$.
149. Table. The lines leading to Genera 10–12 should stand thus:—

. . . . .	conical or compressed . . .	11. PORPHYROPS.
more than one-third of the length of wing: Third joint of antenna	transversely orbiculate .	12. DIAPHORUS.
	oblong	10. ARGYRA.

159. 35. *for* 13 *read* 14.
167. 39. *for* third *read* second.
174. 24. *for* Ztg.; Stt. *read* Stg.; Ztt.
179. 5. *for* acuminata *read* attenuata.
182. 43. *for* Pz. *read* Pz. fn. liv. 16!
188. 22. *for* with yellow coxæ *read* knees immaculate.
188. 23. *for* coxæ mostly dusky *read* knees blackish.
193. 10. *for* S. *read* I.
194. 15. *for* 3 : 1 : 1 *read* 0 : 1 : 1.
195. 17. *for* Mq. iv. *read* Mg. iv.
196. 6. *for* neutral *read* ventral.
201. 10. *after* Mg. Zw. *add* vii.
210. 6. *for* S. *read* I.
213. 29. *for* abdomen *read* hypopygium.
215. 22. *for* lip *read* tip.
216. 1, 4, 12. *for* Ungues *read* Onychia.
218. 22. for *Medeterus* read *Medetera.*
219. 11. *after* Ztt. *add carnivorus*, Fischer.
220. 29. *for* inflated *read* inflected.
220. 34. *for* third *read* hind.
220. 35. *for* Onychia *read* Empodium.

VOLUME II.

179. 4. *read* 4. **fontinalis**, Fln. suppl. 16 (1827).—*arcuata*, Mq.
183. 8. *for* subcubital *read* cubital.
240. 30. *for* **Tethnia** *read* **Tethina.**
259. 20, 21. *for* præbrachial *read* pobrachial.
263. 15, 16. *for* recurrent *read* radial.
283. 22. *read* the smaller onychium underlying the greater unguis.
285. 18. *read* Genus II. **LIPOPTENA.**

LIPOPTENA, Nitzsch grm. mag. iii. 310 (1818). *Melophagus* p., et *Ornithobia*, Mg. *Hæmobora*, Ct. *Leptotena*, Mq. *Alcephagus*, Gmtl.

286. 11. *read* 1. **cervi**, L. Fn. S. 1944 (1761); Fb.; Pz.!; Nitzsch; Mg.; Mq.; Ztt.—*cervina*, Fln.—*pallida*, Mg.—*pallipes*, Ct.

SUBFAMILY 10. HYDROMYZIDES, ii. 247.—*Ephydrinæ*, Stnh.; Zett.

As there are many references to be added in this group, and measurements to be corrected, the whole of the species enumerated in the second volume are included in the following revision.

Genus I. OCHTHERA, ii. 249; Stnh.*

1. **mantis,** ii. 250; Stnh.!; Ztt.; Lw.; Rdn.

Genus II. NOTIPHILA, ii. 250; Stnh.

1. **riparia,** ii. 251. 2; Stnh.; Ztt.—Antennæ with the second joint ferruginous; rays of the arista about fourteen. Abdomen distinctly spotted and freckled with black.

2. **cinerea,** ii. 251. 1; Stnh.!; Ztt.—Arista with about ten rays.

3. **uliginosa,** ii. 251. 3.—*tarsata,* Stnh.; Ztt.—Arista with about ten rays.

Genus III. DICHÆTA, ii. 251.—*Notiphila* p., Stnh.; Ztt.—*Keratocera* p., Desv.

1. **caudata,** ii. 251. 4; Stnh.; Ztt.—*nigra,* Desv.

Genus IV. DISCOMYZA, ii. 251; Stnh.; Ztt.

1. **incurva,** ii. 252. 5; Stnh.; Ztt.

2. **cimiciformis** (Curtis, MSS.), Nat. H. Rev. ii. 124 (1855).

Genus V. TRIMERINA, ii. 252.—*Psilopa B,* Stnh.; Zett.

1. **madizans,** ii. 252. 6; Stnh.; Ztt.—*nigella,* Mg.

Genus VI. PSILOPA (*A*), Stnh.†—*Hygrella,* ii. 252.—*Notiphila* p., Ztt.

1. **nitidula,** ii. 253. 7; Stnh.; Ztt.—Var. *compta,* Mg.

2. **leucostoma,** ii. 253. 8; Stnh.; Ztt.—*æstuans?,* L. fn. ii. 1870 (*antennis setariis.*)

Genus VII. DISCOCERINA, ii. 253.—*Clasiopa,* Stnh.

1. **obscurella,** Fln.; Stnh.; Ztt.—*nigrina,* var. β. ii. 253. 9.—Distinguished by the longer face, which is transversely gibbous in the middle, and inflected below, with a regular row of four stout bristles down each side, the orbit also being very minutely ciliated.

2. **nigrina,** Mg. ii. 253. 9.—var. γ. *cinerella,* Stnh.; Ztt.—The variety α (ibid.), with the front above the antennæ and the face whitish, the third joint of the antennæ at the base beneath ferruginous, and the tarsi of a lighter colour, may be a distinct species. It is much rarer than the other form.

3. **pulicaria,** ii. 254. 11.—*fuscella,* Stnh.; Ztt.

4. **calceata,** ii. 253. 10.—*nigrina,* Stnh.; Ztt. Long. $1\frac{1}{3}$; alar. 3 lin.

5. **glabra,** ii. 254. 12. Long. $1\frac{1}{4}$; alar. 3 lin.

Genus VIII. HECAMEDE, ii. 254.—*Psilopa* p., Bohemann.

1. **albicans,** ii. 254. 13.—*globifera,* Bohemann, Act. Holm. 204 (1853).

Genus IX. HYDRELLIA, ii. 254; Stnh.—*Notiphila* p., Ztt.

1. **laticeps,** Stnh.! 229. 26; Ztt.—*cardamines* (major), ii. 255. 1, (descr. add.)

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* For the sake of uniformity the subgenera of Haliday and Stenhammar are treated here as genera.

† Stenhammar's application of the generic name *Psilopa,* though not to the original type, is adopted, to get rid of the synonym *Hygrella,* condemned on etymological grounds by Agassiz, not without reason. The different accent will admit *Psilōpa* to stand along with *Psilŏpus* (Fam. *Dolichopidæ,* i. 150).

Abdominis segmento quinto elongato; mas, *hypopygio elongato subconico.* Long. $1\frac{1}{4}$; alar. 3 lin.

2. **flavilabris,** Stnh. 235. 31; Ztt.—*cardamines* (minor), ii. 255. 1. (descr. add.) *Abdominis segmentis subæqualibus;* mas, *quinto parum elongato, hypopygio brevi subtruncato.* Long. $\frac{3}{4}$; alar. 2 lin.

3. **flaviceps,** ii. 225. 2.—*discolor,* Stnh.; Ztt.

4. **hydrocotyles,** ii. 256. 3. 5. **porphyrops,** ii. 256. 4.

6. **thoracica,** ii. 256. 5.—Obs. *H. cæsia,* Stnh., differs by the black tarsi.

7. **ranunculi,** ii. 256. 6.—*incana,* Stnh.; Ztt.

8. **griseola,** ii. 356. 7; Stnh.!; Ztt.

9. **chrysostoma,** ii. 257. 8.—*incana,* var. Stnh. 10. **tarsata,** ii. 257. 9.

11. **albiceps,** ii. 257. 10.—*plumosa,* Stnh.—*mutata,* Ztt.

12. **flavicornis,** Fln.; Stnh.—*erythrostoma,* ii. 257. 11.—*nigripes,* Ztt.

13. **cochleariæ,** ii. 258. 12.

14. **albilabris,** ii. 258. 13.—*argyrostoma,* Stnh.!; Zett.

Genus X. ATISSA, ii. 258.

1. **pygmæa,** ii. 258. 14.

Genus XI. GLENANTHE, ii. 258.

1. **ripicola,** ii. 259. 15; Nat. H. Rev. ii. pl. ii. fig. 12.

Genus XII. HYDRINA, ii. 260.—*Philygria* p., Stnh.

1. **picta,** ii. 260. 1; Stnh.; Ztt.—*pullula,* Fln.

2. **punctato-nervosa,** ii. 260. 2; Stnh.; Ztt.

3. **flavipes,** ii. 260. 3; Stnh.!; Ztt. 4. **stictica,** ii. 260. 4. 5. **interstincta,** ii. 261. 5; Stnh.; Zett. 6. **interrupta,** ii. 261. 6. 7. **posticata,** ii. 261. 7.

Genus XIII. HYADINA, ii. 261.—*Philygria* p., Stnh.

1. **guttata,** ii. 261. 8; Stnh.!; Zett.—Var. *brevicornis,* Ztt. Long. 1; alar. $2\frac{1}{2}$ lin. 2. **scutellata,** ii. 262. 9.

Genus XIV. AXYSTA, ii. 262.—*Philygria* p., Stnh.

1. **viridula,** ii. 262. 10.—*punctulata,* Stnh.; Ztt. Long. 1; alar. $2\frac{1}{4}$ lin.

Genus XV. PELINA, ii. 262.—*Telmatobia,* Stnh.

1. **ænea,** ii. 262. 11; Stnh.!; Ztt. Long. $1\frac{1}{2}$; alar. $3\frac{1}{2}$ lin.

2. **ænescens,** Stnh. 210. 13; Ztt.; Nat. H. Rev. ii. 124.—*ænea,* Ztt. lap.

Genus XVI. PARYDRA, Stnh.—*Napæa,* ii. 263.

1. **coarctata,** ii. 263. 12; Stnh.; Ztt.

2. **littoralis,** ii. 263. 13.—*furcata,* Stnh.!; Zett.

3. **aquila,** ii. 263. 14; Stnh.; Ztt. Long. 2; alar. 5 lin.

4. **fossarum,** ii. 263. 15.—*affinis,* Stnh.!; Ztt. Long. 1; alar. 3 lin.

5. **hecate,** ii. 264. 16. Long. 1; alar. $2\frac{1}{2}$ lin.

6. **pusilla,** ii. 264. 17.—*nasuta,* Stnh.; Ztt. Long. 1; alar. $2\frac{1}{4}$ lin.

Genus XVII. ILYTHEA, ii. 264.—*Epipela,* Stnh.

1. **spilota,** ii. 264. 18.—*notata,* Stnh.!; Ztt. Long. alar. $1\frac{1}{6}$; 3 lin.

Genus XVIII. CÆNIA, ii. 264.—*Ephydra* p., Stnh.; Ztt.—*Notiphila* p., Roser.

1. **albula,** ii. 265. 19.—*fumosa,* Stnh.; Ztt.

2. **palustris,** ii. 265. 20; Stnh.; Ztt. Long. $1\frac{1}{3}$; alar. $3\frac{1}{2}$ lin.

3. **obscura,** ii. 265. 21.

4. **defecta,** ii. 265. 22.—*albidipennis,* Stnh.; Ztt.—*cæruleifrons,* Roser?

Genus XIX. SCATELLA, ii. 265.—*Ephydra* p., Stnh.; Ztt.

1. **sibilans,** ii. 265. 23.—*nubilipennis,* Stnh.; Ztt. Long. $1\frac{1}{4}$; alar. 3 lin.

2. **leucostoma,** ii. 266. 24. Long. $\frac{4}{5}$; alar. $2\frac{1}{3}$.

3. **sorbillans,** ii. 266. 25.—*argyrostoma,* Stnh.; Ztt.—*stagnalis,* fœm., Fln. Long. $1\frac{1}{4}$; alar. $3\frac{1}{2}$ lin.

4. **æstuans,** ii. 266. 26.—*flavipennis,* Stnh.; Ztt. Long. $1\frac{1}{4}$; alar. $3\frac{1}{4}$ lin.

5. **stagnalis,** Fln. p.; Stnh.; Ztt.—*buccata,* ii. 266. 27. Long. $1\frac{1}{2}$; alar. $3\frac{1}{2}$ lin.

6. **lutosa,** ii. 266. 28.—*flavescens,* Stnh.; Ztt. Long. $1\frac{1}{2}$; alar. $2\frac{3}{4}$ lin.

7. **despecta,** ii. 266. 29.—*fenestrata,* Stnh.; Ztt.—*maculipennis,* Gmtl. Long. 1; alar. $2\frac{1}{2}$ lin.

8. **æstivationis,** L. fn. ii. 1843 (1761).—*noctula,* ii. 267. 31; Stnh.; Ztt.—*irrorata?,* Mg.; Meq.—Var. *comta,* ii. 267. 31.

9. **quadrata,** ii. 267. 32; Stnh.; Ztt.—Var. *Stenhammari,* Ztt.

Genus XX. TICHOMYZA, ii. 267; Desv.—*Ephydra* p., Mg.; Gmtl.

1. **fusca,** ii. 267. 33.—*longipennis,* Mg.—5-*punctata,* Gmtl.—*urinaria,* Desv. Long. $2\frac{2}{3}$; alar. $6\frac{1}{4}$ lin.

Genus XXI. HALMOPOTA.—*Ephydra* p., Bouché.

Caput depressum, hypostomate porrecto fornicato utrinqne ciliato, epistomate exserto. Antennæ articulo tertio obtuso, arista glabra. Ungues parum curvati, onychiis minutissimis. Venula discalis alæ margini proxima.

1. **salinaria,** Bouché, nat. 99. 91. pl. vi. f. 13, 14!—Long. $2\frac{1}{2}$; alar. $5\frac{1}{2}$ lin.
About salterns; the larva in the brine-pits.

Genus XXII. EPHYDRA, ii. 268.—*Cænia* p., Von Heyden.

1. **riparia,** ii. 268. 34 (demt. synon. *salinaria*), Stnh.; Ztt. *Antennarum articulo tertio mutico, arista villosula, vena radiali apice subrecta;* mas, *peristomate subtiliter ciliato, abdominis segmento quinto elongato sextum cingente;* fœm. *peristomate pectinato.* Long. $2\frac{1}{4}$; alar. 5 lin.
Abundant everywhere by the seacoast, on pools of brackish water.

2. **halophila,** Von Heyden, e. z., v. 203 (1844).—*salinæ,* Ztt. *Antennarum articulo tertio unipili, arista villosula, vena radiali apice subrecta, peristomate subtiliter ciliato,* mas, *aut pectinato,* fem.
Swarms about salterns; the larva in the brine-pits, up to six per cent. of salt.

3. **micans,** ii. 268. 2.—*aurata,* Stnh.!; Zett. *Antennarum articulo tertio unipili, arista subtiliter pubescente, vena radiali apice incurvata, peristomate subtiliter ciliato;* mas, *abdominis segmentis subæqualibus, quinto infra bipartito.*
Common in many places on fresh-water lakes and pools.

Genus XXIII. CANACE, ii. 268.

1. **nasica,** ii. 268. 36; Nat. H. Review, ii. 64. pl. ii. fig. 11. Head above brassy green.

INDEX.

	Page
Aëdes	242
cinereus	243
Anarete	60
candidata	60
Anisomera	272
nigra	272
vittata	273
Anopheles	248
bifurcatus	249
maculipennis	249
Asindulum	46
flavum	47
Aspistes	144
berolinensis	145, 342
Azana	26
anomala	26, 342
Bibio	134
clavipes	138
ferruginatus	137
hortulanus	136
hybridus	138
Johannis	137
lanigerus	137
leucopterus	136
Marci	136
nigripes	138
nigriventris	137
Pomonæ	136
venosus	136
BIBIONIDÆ	134
Boletina	32
borealis	33
dubia	33
flava	34
nemoralis	34
plana	34
Bolitophila	70
cinerea	71
fusca	71
Campylomyza	61
Aceris	62
C. bicolor	62
flavipes	62
globifera	62
halterata	62, 342
Catocha	59
brevinervis	60
latipes	60
Cecidogona	58
carnea	59
Cecidomyia	73
abrupta	98
acrophila	82
Æthiops	118
agilis	110
albiceps	99
albilabris	78
albimana	126
albipennis	78
albipes	100
albitarsis	127
albonotata	118
ampla	120
analis	128
angustipennis	124
apicalis	107
arcuata	96
articulata	108
atriceps	102
basalis	88
Betulæ	85
bipunctata	122
botularia	111
Brassicæ	84
brevicornis	99
brevis	93
bursaria	89
callida	95
Capreæ	123
Cardaminis	83
centralis	115
Ceomatis	115
Cerasi	116
ciliata	104
C. cilipes	116
cinctipes	90
cingulata	110
circumdata	85
concinna	99, 342
concolor	98
conformis	113
coniophaga	106
costalis	83
crassicornis	119
crassipes	120
Cratægi	83
Danae	131
decolorata	87
decora	97
decorata	116
deflecta	124
digitata	112
discalis	102, 342
discolor	87
disjuncta	104
dolosa	114
dorsalis	127
dumetorum	104
elegans	121
evanescens	103
Euphorbiæ	82
expandens	101
extrema	119
Fagi	121
fasciata	119
fascipennis	95
filipes	103
finalis	100, 342
fixa	107
flava	98
flavcolata	106
flexa	112, 342
floricola	122
funesta	120
Galeobdolontis	85
Galii	86
geniculata	93

	Page
C. gracilis	124
graminicola	123
heterobia	81
impudica	109
incompleta	101
innotata	82
invaria	117
invocata	106
iteophila	81
Klugii	82
latibulorum	91
latipennis	99
latiuscula	108
Leachiana	109
lentipes	122
leucopeza	126
limbata	111
Linariæ	97
linearis	112
Loti	97
lugubris	129
maculata	96
marginata	107
marginem-torquens	79
maura	102
minuta	93
modesta	104
mœsta	104
mutabilis	92
nana	94
nemoralis	125
nigrina	128
nodicornis	125
notabilis	114
nubeculosa	96
obfuscata	86
ochracea	103
pallipes	126
Papaveris	78
pavida	90
pectoralis	128
peregrina	94
Persicariæ	79
piligera	121
Pini	111
plagiata	96
plena	118
Polypori	92
pratorum	86
præcox	113
pubescens	104
pulchella	95
Pyri	89
repleta	102
riparia	79
rosaria	77
C. Rumicis	100
Saliceti	90
Salicina	80
Salicis	77
Sarothamni	117
semiopaca	101
serotina	84
signata	91
Sisymbrii	80
sobria	108, 342
socialis	93
sociata	87
solennis	104
Strobi	84
sylvatica	92
tecta	88
tendens	113
tenella	129
tenuicornis	109
terminalis	81
testacea	91
tibialis	94
Tremulæ	114
Tritici	103
valvata	125
venusta	127
verna	115
Veronicæ	87
Ulmariæ	88
Urticæ	89
Xanthopyga	110
CECIDOMYZIDÆ	72
Ceratopogon	205
æstivus	221
alacer	213
albicans	221
albipes	236
amœnus	218
arcuatus	220
bicolor	234
bipunctatus	210
brachialis	229
brevipennis	212
brunnipes	217
calceatus	239
candidatus	228
ciliatus	211
copiosus	227
crassipes	211
cunctans	221
distinctus	229
divaricatus	213
egens	222
fasciatus	232
fascipennis	219
femoratus	233
C. ferrugineus	230
flavipalpis	239
flavipes	228
flavirostris	226
forcipatus	216
frutetorum	215
fuscus	217
gracilipes	234
gracilis	227
gracilis	236
halteratus	215
illustris	226
inflatus	233
Kaltenbachii	210
lacteipennis	225
lepidus	212
lineatus	231
leucorum	216
minutus	218
modestus	222
murinus	213
neglectus	224
niger	209
nitidus	225
nobilis	237
obscurus	223
ochraceus	224
ornatus	236
pallidus	209
pavidus	217
piceus	211
pictipennis	219
pictus	240
pulicaris	220
pumilus	223
regulus	209
rostratus	216
rubiginosus	234
rufipectus	231
saltans	214
scutellatus	222
sericatus	218
serripes	230
signatus	235
solstitialis	237
spinipes	228
splendidus	224
sylvaticus	215
tæniatus	238
tenuis	213
tibialis	232
titillans	214
valvatus	234
variegatus	229
varius	218
velox	215

Page
C. venustus 235
versicolor . . . 223
vitiosus 225
CHIRONOMIDÆ . . 149
Chironomus . . . 149
adjunctus . . . 190
affinis 162
albidus 169
albimanus . . . 163
albipennis . . . 175
albipes 164
alligatus 190
Ammon 194
annularius . . . 165
annulipes . . . 192
appositus . . . 191
aprilinus . . . 157
aterrimus . . . 186
brevitibialis . . . 155
brunnipes . . . 165
byssinus 191
carbonarius . . . 173
Chiron 194
chloris 159
cingulatus . . . 172
coæquatus . . . 190
compertus . . . 191
contingens . . . 191
convectus . . . 171
conversus . . . 175
convestitus . . . 177
convictus . . . 161
debilis 160
denotatus . . . 190
depropcrans . . . 188
disclusus 163
discrepans . . . 169
dispessus . . . 161
dissideus 154
divisus 192
dolens 178
dorsalis 168
effusus 180
ejuncidus . . . 155
elegans 186
eminulus . . . 156
enotatus 170
excerptus . . . 179
expalpans . . . 181
exspatians . . . 182
ferrugineo-vittatus . 172
fertus 192
flabellatus . . . 157
flaveolus 167
flavimanus . . . 157
frigidus 185

Page
C. fuscipennis . . . 164
fuscipes 180
futilis 156
gibbus 163
glabricollis . . . 156
habilis 192
hebescens . . . 177
ictericus 156
imbecilis 168
impar 174
impensus . . . 184
incallidus . . . 183
incertus . . 162, 342
incoactus . . . 175
incomptus . . . 180
inopertus . . . 164
inscendens . . . 179
inserpens . . . 185
interseptus . . . 182
intextus 176
intrudens . . . 179
involitans . . . 171
irretitus 172
irritus 178
lacustris 193
lentulus 178
leucopus 173
littorellus . . . 174
lividus 160
longipes 158
lucens 187
lucidus 173
lugubris 170
lugubris 193
maculipennis . . 163
malacus 167
mancus 161
melaleucus . . . 190
minimus 191
minusculus . . . 182
minutus 187
modestus . . . 190
modicellus . . . 162
mœrens 178
morulus 173
motitator . . . 189
moturus 88
murcidus . . . 177
nactus 179
nemoralis . . . 174
nervosus . . . 158
nexilis 184
nigratus 184
nigrimanus . . . 172
nigro-viridis . . 159
nitidicollis . . . 187

Page
C. notatus 185
notescens . . . 156
novatus 184
nubeculosus . . . 162
nugax 186
obditus 181
objectans . . . 157
oblidens 180
obnixus 165
obreptans . . . 168
obscurimanus . . 193
obscurus 183
obsepiens . . . 183
obsistens . . . 188
obtexens 188
obvertens . . . 177
obvius 174
occipiens . . . 165
offectus 185
olivaceus . . . 181
opacus 164
oppertus 183
oppetitus . . . 176
opplens 187
paganicus . . . 183
paganus 168
pallens 166
pallidicornis . . 169
parilis 161
patens 170
patibilis 174
pedellus 164
perennis 169
perexilis 191
pergens 187
perlevis 158
permacer . . . 183
perpessus . . . 178
perreptans . . . 177
persidens . . . 181
pertenuis . . . 182
pertractus . . . 188
pervulsus . . . 179
pilipes 167
plebeius 187
plumosus . . . 171
præcox 159
prasinatus . . . 158
prasinus . . . 160
psittacinus . . . 167
pulsus 165
punctipes . . . 154
pusillus 154
pusio 158
pygmæus . . . 192
riparius 166

Page
C. rubicundus . . . 181
rufipes 176
rufovittatus . . . 155
scalænus 156
separatus . 171, 342
sordidellus . . . 185
stercorarius . . . 186
sticticus 172
stramincipes . . 175
sulphuricollis . . 159
sylvestris . . . 189
tarsalis 170
tendens 169
tentaus 166
tenuis 155
testaceus 182
tibialis 184
tousus 195
tremulus . . . 189
trichopus . . . 169
tritus . . . 162, 342
Typhon 195
vagans 163
variabilis . . . 178
venosus 180
vernus 160
virescens . . . 167
viridanus . . . 161
viridis 158
viridulus 155
Waltlii 194
zonarius 176
Clunio 241
marinus 241
Cordyla . . . 24
fasciata 25
flaviceps 25
Corethra 250
culiciformis . . . 251
pallida 252
plumicornis . . . 251
Corynoneura . . 203
atomaria 205
minutissima . . 204
Ctenophora . . . 333
atrata 336
bimaculata . . . 335
flaveolata . . . 336
nigricornis . . . 336
ornata 336
pectinicornis . . 335
Cylindrotoma . . 312
distinctissima . . 313
diversa 313
Culex 243
annulatus . . . 246

Page
C. annulipes . . . 246
bicolor 248
cantans 246
ciliaris 247
detritus 247
fumipennis . . . 246
lutescens . . . 248
nemorosus . . . 247
CULICIDÆ 242

Diadocidia . . . 48
ferruginosa . . . 49
Dicranota . . . 305
bimaculata . . . 306
pavida 306
senilis 306
Dilophus 139
femoratus . . . 140
spinatus 140
Ditomyia 63
annulata . . . 64, 342
fasciata 63
vittata 64
Dixa 266
æstivalis 266
aprilina 267
maculata 267
nebulosa 267
Dolichopeza . . . 315
chirothecata . . 316

Epidapus 56
venaticus . . . 56
Erioptera . . . 273
atra 278
cinerascens . . . 275
diuturna 276
flavescens . . . 275
fuscipennis . . . 277
grisea 276
imbuta 275
lineata 276
lutea 275
maculata 274
murina 278
nodulosa 277
obscura 278
ochracea 278
tænionota . . . 277
trivialis 276

Geranomyia . . . 310
unicolor 310

HETEROCLITÆ . . 263

Lasioptera . . . 132

Page
L. albipennis . . . 133
picta 133
stygia 133
Leia 26
analis 30
basalis 30
bifasciata . 30, 342
bimaculata . . . 28
brevicornis . 31, 342
defecta 32
diversa 31
fascipennis . . . 27
fumosa 28
infera 30
octomaculata . . 27
parallela 31
pubescens . . . 31
pulchella . . . 27
sciarina . 18, 29, 342
Winthemii . . . 29
Leptomorphus . . 47
Walkerii 48
Lestremia . . . 57
cinerea 58
leucophæa . . . 58
Limnobia . . . 280
albifrons . . . 295
analis 296
bifasciata . 293, 342
chorea 297
didyma 296
discicollis . . . 285
disjuncta . . . 294
dispar 286
dumetorum . . . 297
erraus 292
fasciata 283
ferruginea . . . 286
filata 305
finitima 301
flavipes 295
glabrata 299
immaculata . . . 302
inconclusa . . . 299
iunsta 298
lateralis 304
leucophæa . . . 290
lineola 287
littoralis 291
lucorum 285
lutea 297
maculata . . . 293
marmorata . . . 284
modesta 297
morio 296
nemoralis . . . 290

Page
L. nigrina 287
nubeculosa . . . 295
occulta 302
picta 288
pilipes 291
punctata . . . 288
punctigera . . . 298
punctum . . . 286
secreta 303
sexmaculata . . . 303
stigma 298
stigmatica . . . 298
straminea . . . 287
tarda 289
tempestiva . . . 285
tenella 300
transversalis . . 294
trimaculata . . . 283
tripunctata . . . 295
turpis 300
vagans 292
unicolor 289

Macrocera . . . 67
angulata 69
centralis 69
fasciata 70
lutea 69
phalerata . . . 70
stigma 69
vittata 69
Mochlonyx . . . 252
effœtus 252
Mycetobia . . . 49
pallipes 50
Mycetophila . . 8
bicolor 18
bimaculata . . . 12
binotata 11
cingulum . . . 13
conformis . . . 20
crassicornis . . . 20
diagonalis . . . 23
discoidea . . . 18
fasciata 17
fenestralis . . . 19
finalis 21
fungorum . . . 22
fuscicornis . . . 14
fuscula 20
indecisa 22
lateralis 22
leioides 24
leptura 23
lineola 14
longicornis . . . 21

Page
M. lunata 13
lutescens . . . 13
maculosa . . . 17
nigra 10
nigritula 15
notata 11
ornaticollis . . . 19
paludosa 11
pictipennis . . . 12
selecta 16
semifusca . . . 23
sericea 17
sobria 19
stolida 15
striata 16
tarsata 24
terminalis . . . 21
vara . . . 19, 342
unicolor 16
uninotata . . . 15
MYCETOPHILIDÆ . . 6

NEMOCERA . . . 5
Nephrotoma . . 316
dorsalis 317

Orphnephila . . 264
testacea 265

Pedicia 314
venosa 315
Pericoma 256
bullata 257
calceata 260
canescens . . . 258
fusca 260
lucifuga 257
nubila 260
ocellaris 258
palustris 259
soleata 257
trifasciata . . . 259
ustulata 258
PHLEBOTOMIDÆ . . 253
Platyura 64
antica 66
atrata 65
concisa 67
discoloria . . . 67
fasciata 66
flavipes 66
laticornis . . . 65
lineata 66
marginata . . . 64
mycetophiloides . 65
nigriceps 65
servula 67

Page
P. vitripennis . . . 66
unicolor 67
Psychoda . . . 254
phalænoides . . . 255
sexpunctata . . . 255
Ptychoptera . . 337
albimana . . . 338
contaminata . . 339
fasciata 339
lacustris 339
scutellaris . . . 339
Pulex 1
Canis 2
Columbæ . . . 5
Erinacei 3
Felis 3
Fringillæ . . . 4
Gallinæ 2
Hirundinis . . . 5
irritans 2
Martis 3
Melis 5
Musculi 4
Sciurorum . . . 3
Talpæ 4
Vespertilionis . . 4
PULICIDÆ 1

Rhamphidia . . . 308
flava 309
longirostris . . . 309
Rhipidia 311
maculata . . . 312
RHYPHIDÆ . . . 340
Rhyphus 340
cinctus 341
nigricans . . . 341

Scatopse 140
albitarsis . . . 144
bifilata 142
brevicornis . . . 144
clavipes 143
consimilis . . . 142
flavicollis . . . 142
halterata 144
infumata 143
integrata . . . 143
minuta 143
notata 141
picea 143
simplex 144
soluta 144
Sciara 50
aprilina 55
brevipennis . . . 56

	Page
S. brunnipes	52
caudata	53
compressa	56
fenestrata	54
flavipes	55
fucata	54
fuscipennis	53
fuscipes	52
gracilis	55
hyalipennis	53
longipes	55
morio	52
minima	54
nitidicollis	52
pallida	56
pallipes	53
præcox	53
pulicaria	54
pusilla	55
scatopsoides	54
Thomæ	52
vitripennis	53
Sciophila	35
alicna	42
annulata	38
cingulata	38
compressa	42
congrua	37
contracta	41
fasciata	37
ferruginea	39
fimbriata	38
halterata	43
hilaris	37
hirta	40
hyalinata	36
lutea	40
marginata	36
maura	41
nigra	41
ochracea	41
pictipennis	42
punctata	39
ruficollis	39
rufilatera	40
tenuis	36
S. trilineata	40
trivittata	38
vitripennis	39
SIMULIDÆ	145
Simulium	146
elegans	148
fuscipes	148
lineata	148
marginata	148
reptans	147
SUCTORIDEA	1
Sycorax	262
silacea	262
Symplecta	278
punctipennis	279
stictica	279
Tanypus	196
carneus	201
choreus	200
culiciformis	201
ferrugineicollis	203
lætus	201
melanops	202
melanurus	203
monilis	202
nebulosus	199
nervosus	203
notatus	202
plumipes	202
punctatus	200
punctipennis	200
pusillus	203
varius	199
zonatus	201
Tetragoneura	43
hirta	44
nigricornis	45
sylvatica	45
Tipula	318
annulicornis	330
cornicina	331
crocata	333
excisa	323
fascipennis	329
fimbriata	327
T. flavescens	332
flavolineata	325
gigantea	321
hortensis	322
imperialis	333
lateralis	324
lineola	323
longicornis	322
lunata	328
luteipennis	328
lutescens	321
marginata	324
melanoceras	328
nigra	326
nodicornis	326
nubeculosa	323
ochracea	229
oleracea	325
pabulina	324
pagana	327, 342
paludosa	325
plumbea	327
pruinosa	326
quadrifaria	332
rufina	322
scurra	332
Selene	329
Selenitica	329
vaga	330
varipennis	323
vernalis	325
TIPULIDÆ	268
Trichocera	270
fuscata	271
hiemalis	271
regelationis	271
Trichomyia	261
urbica	261
Ula	307
pilosa	308
Ulomyia	261
hirta	261
Zygoneura	57
sciarina	57

END OF VOLUME IV.

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PLATE XXI.

Family I. PULICIDÆ.

Genus 1. **Pulex** (p. 1). Fig. 1. *Pulex irritans*, female. 1 *a**, mouth of *Pulex Canis*, with the parts separated: *md.* mandibles, *mx.* maxilla, (* the thickened basal portion, † the thin apical portion,) *m.p.* the maxillary palpi, *t.* the tongue, *mn.* mentum, *lb.* labium, *l.p.* labial palpi; 1 *b**, end of one of the mandibles, showing the thickened horny and thinner hyaline edges, the marginal denticulations strongest on the former; 1 *c**, parts of the mouth, seen laterally, showing one maxilla and its palpus, one mandible and the labium with its pair of four-jointed palpi; 1 *d**, the same parts seen in another position; 1 *e**, maxilla with its palpus; 1 *f**, terminal joint of the tarsus of the middle leg, showing only one of the ungues, lobed at the base, somewhat as in the *Coriaceæ*, four rigid spines beneath, and several more slender ones round the tip; 1 *g**, the two ungues; 1 *h**, portion of one of the ungues, showing it to be obliquely but finely striated and crenated.

Family II. MYCETOPHILIDÆ.

Genus 1. **Mycetophila** (p. 8). Fig. 2. *Mycetophila cingulum.* 2 *a*, face and antenna of ditto; 2 *b*, wing of *M. binotata.*

Genus 2. **Cordyla** (p. 25). Fig. 3. *Cordyla crassicornis*, Meig. i. 275, n. 2. 3 *a*, antenna of ditto; 3 *b*, terminal joint of tarsus, with ungues and pulvillus.

Genus 3. **Azana** (p. 26). Fig. 4. *Azana anomala*, Stæg. (*Scatopsoides*, Wlk.). 4 *a*, head seen in front; 4 *b*, ditto, sideways.

Genus 4. **Leia** (p. 26). Fig. 5 *a*, wing of *Leia Winthemi;* 5 *b*, face of *L. trimaculata* (wing as in 5 *a*); 5 *c*, wing of *L. pulchella* (Curtis); 6, *L. brevicornis*, Zett. (= *Cordyla valida*, ante, p. 25, and *L. helvola*, ante, p. 31); 6 *a*, face of ditto; 6 *b*, antenna of ditto.

(And see Plate XXIX. Fig. 1.)

Genus 5. **Boletina** (p. 33). Fig. 7. *Boletina dubia.* 7 *a*, head of ditto, seen in front.

Genus 6. **Sciophila** (p. 35). Fig. 8 *a*, face of *Sciophila fasciata;* 8 *b**, wing of *S. pictipennis* (omitting the fasciæ); 8 *c**, wing of *S. venosa* [Hal.?], with the inner edge folded back.

(And see Plate XXIX. Fig. 2.)

Genus 7. **Tetragoneura** (p. 44). Fig. 9 *a*, head of *Tetragoneura* (Winnertz); 9 *b**, wing of *T. sylvatica.*

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* The figures indicated by a * have been communicated by A. H. Haliday, Esq.

DIPTERA, Pl. XXI.

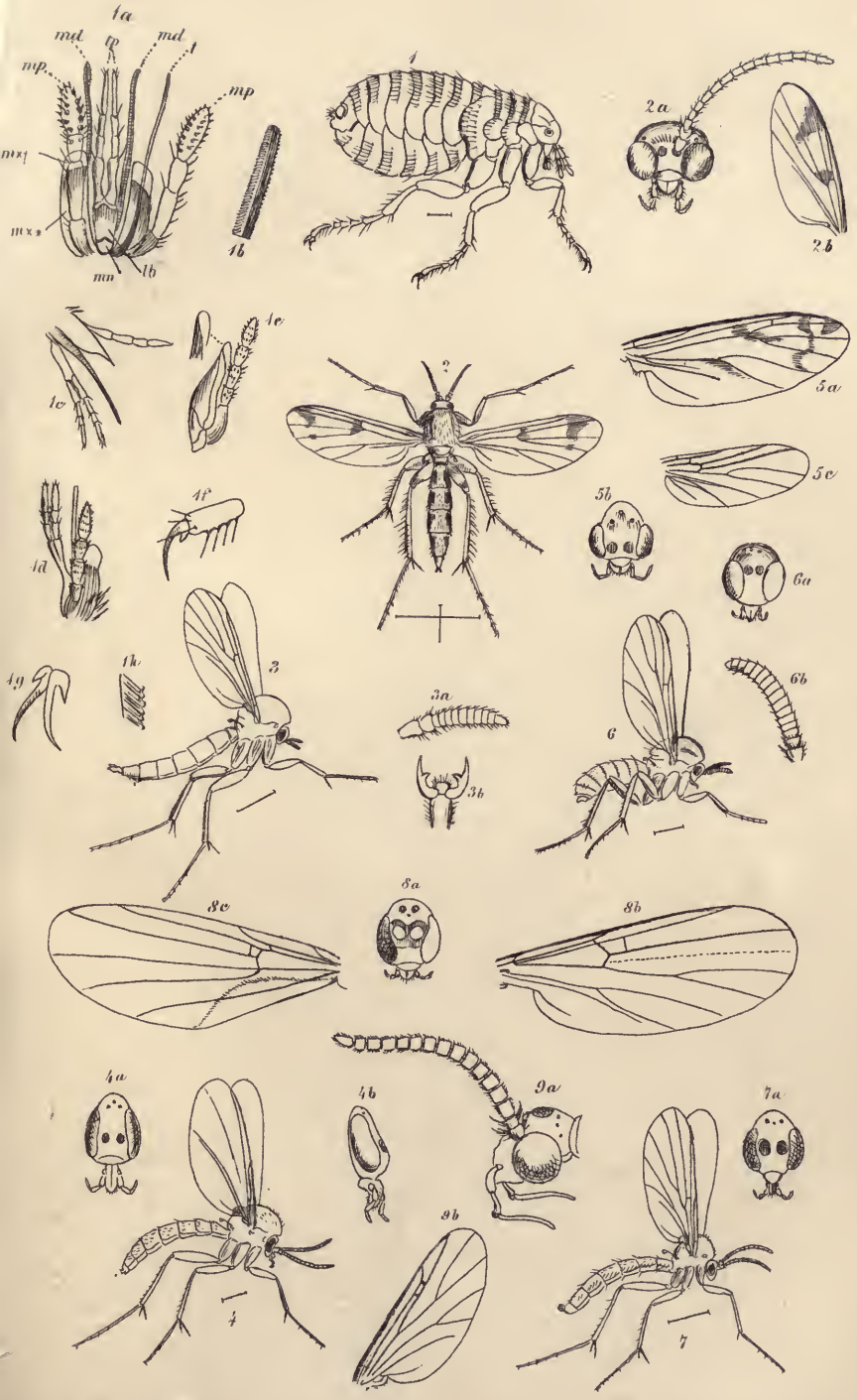

PLATE XXII.

FAMILY II. MYCETOPHILIDÆ (*continued*).

GENUS 8. **Asindulum** (p. 46). Fig. 1*. *Asindulum flavum.* 1 *a*, head and antenna of ditto, seen sideways (Wz.); 1 *b*, ditto, seen in front (Wz.).

(And see Plate XXIX. Fig. 4.)

GENUS 9. **Leptomorphus** (p. 48). Fig. 2 *a*, head and antenna of *Leptomorphus Walkeri*, seen sideways (Curtis); 2 *b*, ditto, seen from above; 2 *c*, middle leg of ditto; 2 *d*, wing of ditto (Curtis).

GENUS 10. **Diadocidia** (p. 48). Fig. 3. *Diadocidia ferruginosa.* 3 *a*, head, and 3 *b*, palpus of ditto (Wz.).

GENUS 11. **Mycetobia** (p. 49). Fig. 4 *a*, antenna of *Mycetobia pallipes;* 4 *b*, hind leg of ditto; 4 *c**, wing of ditto; 4 *d*, head, seen obliquely; and 4 *e*, palpus of ditto (Wz.).

(And see Plate XXIX. Fig. 3.)

GENUS 12. **Sciara** (p. 50). Fig. 5 *a*, head of *Sciara* ——? seen in front (Meig.); 5 *b**, wing of *Sciara Thomæ.*

(And see Plate XXX. Fig. 3.)

GENUS 13. **Epidapus** (p. 56). Fig. 6. *Epidapus venaticus.* 6 *a**, body of ditto, seen sideways.

GENUS 14. **Zygoneura** (p. 57). Fig. 7. *Zygoneura sciarina*, male. 7 *a*, one of the middle joints of the antenna; 7 *b*, antenna of female; 7 *c*, one of the middle joints of ditto.

GENUS 15. **Lestremia** (p. 57). Fig. 8 *a*, antenna of *Lestremia cinerea*, male; 8 *b*, antenna of female; 8 *c*, wing.

(And see Plate XXIX. Fig. 7.)

GENUS 16. **Cecidogona** (p. 58). Fig. 9. *Cecidogona carnea*, female. 9 *a*, antenna of male.

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DIPTERA, Pl. XXII.

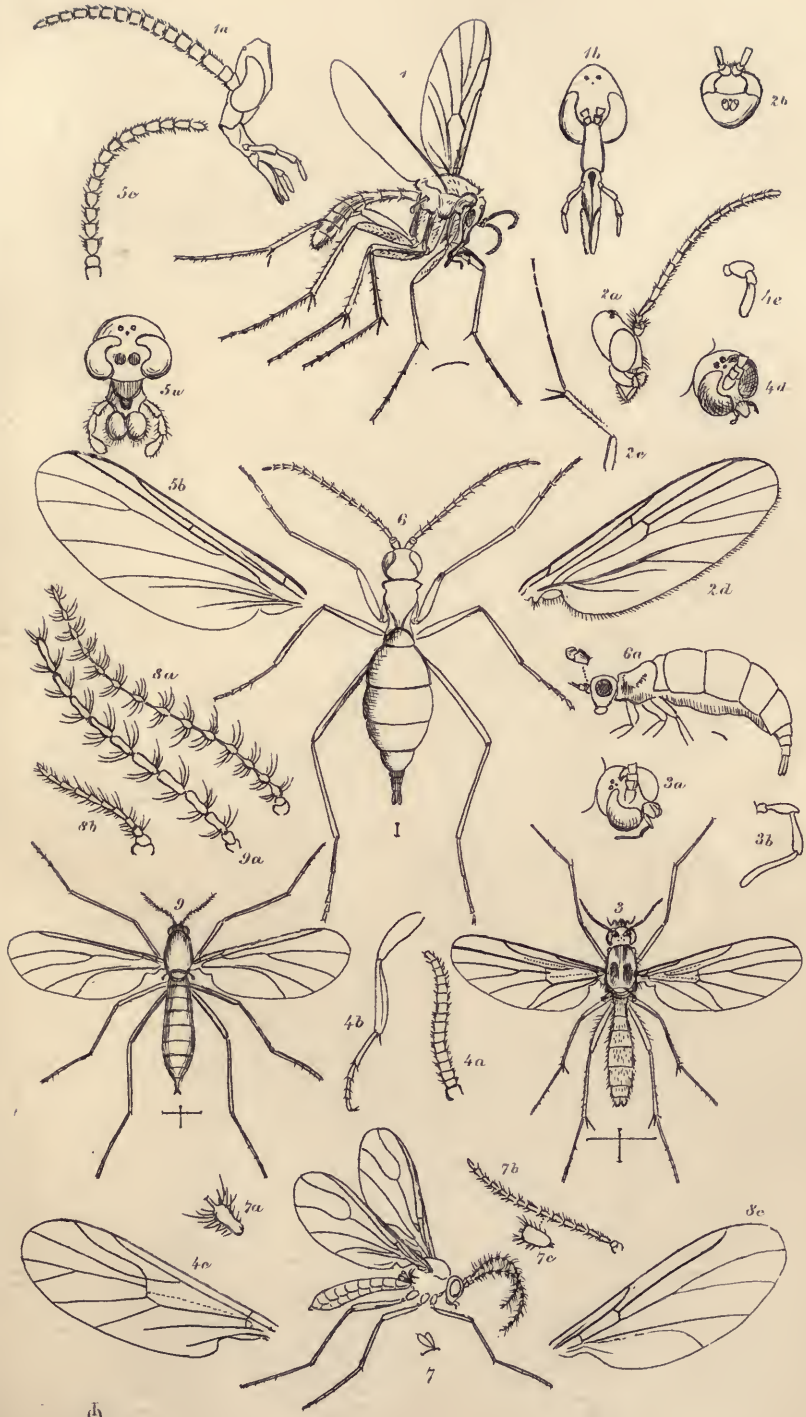

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PLATE XXIII.

Family II. MYCETOPHILIDÆ (*continued*).

Genus 17. **Catocha** (p. 59). Fig. 1. *Catocha latipes*, male. 1 *a*, antenna of female; 1 *b*, fore leg, with dilated tarsus, of female; 1 *c*, ungues and pulvillus of ditto.

Genus 18. **Anarete** (p. 60). Fig. 2*. *Anarete candidata.* 2 *a**, antenna; 2 *b**, labium and palpi.

Genus 19. **Campylomyza** (p. 61). Fig. 3. *Campylomyza* (s. g. *Micromyia*, Rond.) *globifera.* 3 *a*, antenna of ditto; 3 *b*, antenna of *C. halterata.*

Genus 20. **Ditomyia** (p. 63). Fig. 4. *Ditomya fasciata.* 4 *a*, head of ditto from above; 4 *b*, antenna of ditto; 4 *c*, tip of hind tibia and tarsus; 4 *d*, last joint of ditto, with the ungues more magnified. (See also Stephens, Illustr. Br. Ent. pl. 44, fig. 2, for figure of the perfect insect and details of *D. annulata*, Meig.; Stæg.; Zett.; Winn. = *D. ferruginea*, Wlk., ante, p. 64, and = *Mycetophila zonata*, Steph. loc. cit.)

Genus 21. **Platyura** (p. 64). Fig. 5. *Platyura laticornis*, Meig. i. 238, 13. 5 *a*, front of head of ditto; 5 *b*, antenna of ditto; 5 *c*, labium and palpi of *P. marginata* seen sideways; 5 *d*, wing of *P. marginata.*

Genus 22. **Macrocera** (p. 68). Fig. 6 *a*, wing of *Macrocera lutea*, male; 6 *b*, head and antenna of ditto, seen sideways.

Genus 23. **Bolitophila** (p. 71). Fig. 7. *Bolitophila fusca*,† fem. 7 *a*, antenna of ditto; 7 *b*, head of *B. cinerea.*—See also Stephens, Illustr. Br. Ent. pl. 44, fig. 1, for figure and further details of *B. cinerea.*

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† In the female here figured, the oblique veinlet near the tip of the wing reaches the costa beyond the extremity of the subcostal vein. In the male (*Messala Saundersii*, Curt.), it is represented as more transverse, and united to the subcostal before it reaches the costa.—*J. O. W.*

DIPTERA, Pl. XXIII

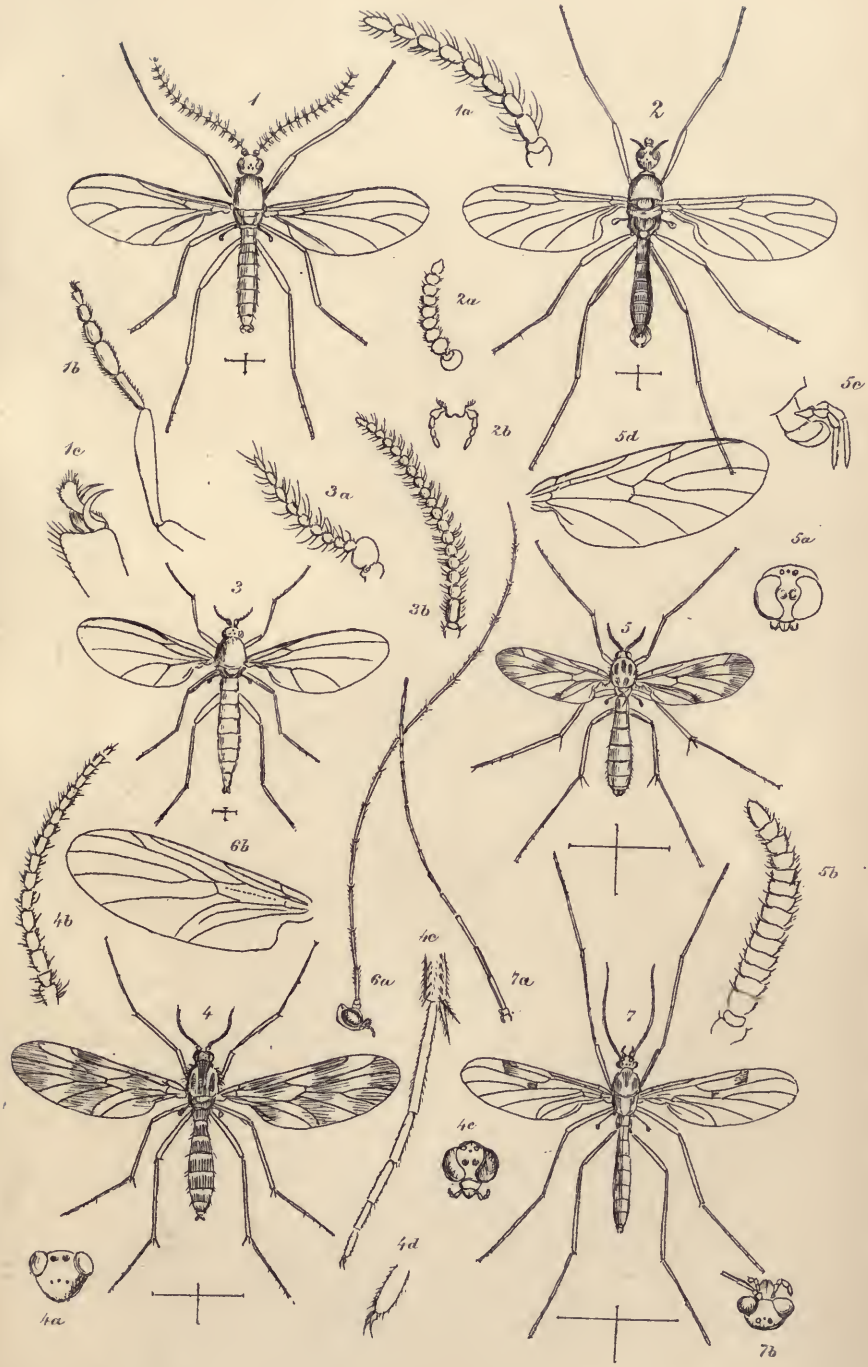

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PLATE XXIV.

Family III. CECIDOMYZIDÆ.

Genus 1. **Cecidomyia** (p. 73). Fig. 1. *Cecidomyia* (*Epidosis*) *longipes*, male, Loew; Winnertz; Linn. Ent. viii. 314 (Tullamore Park, Ireland, *A. H. H.*). 1 *a*, antenna of *C.* (*Diplosis*) *Pini* (Winnertz); 1 *b*, wing of *C.* (*Asynapta*) *pectoralis* (Winnertz); 1 *c*, wing of *C. rosaria* (Winnertz); 1 *d*, antenna of *C.* (*Asphondylia*) *Sarothamni* (Winnertz).

(And see Plate XXIX. Fig. 8, and details.)

Genus 2. **Lasioptera** (p. 132). Fig. 2. *Lasioptera stygia* (from specimen communicated by Mr. Walker,) with the basal joint of all the tarsi very minute. (Query, a species of *Cecidomyia ?*) 2 *a*, antenna of ditto; 2 *b*, antenna of *L. pulchra*, Meig. 7. 267; (*Diomyza pulchra*, Stephens, Illustr. Br. Ent. pl. 42. fig. 4); 2 *c*, wing of *L. Rubi* (Winnertz).

(And see Plate XXX. Fig. 2.)

Family IV. BIBIONIDÆ.

Genus 1. **Bibio** (p. 134). Fig. 3 *a*, head of *Bibio Marci*, female; 3 *b*, antenna of ditto; 3 *c*, wing of ditto; 3 *d*, fore leg of ditto.

(And see Plate XXIX. Fig. 5.)

Genus 2. **Dilophus** (p. 139). Fig. 4. *Dilophus spinatus*, female. 4 *a*, head of male; 4 *b*, palpus of ditto; 4 *c*, antenna of ditto; 4 *d*, anterior tibia and tarsus; 4 *e*, ungues and pulvilli of ditto.

Genus 3. **Scatopse** (p. 140). Fig. 5. *Scatopse bifilata*, male (not female, as described in p. 142). 5 *a*, antenna of ditto; 5 *b*, extremity of abdomen of ditto; 5 *c*, wing of *S. albitarsis*.

Genus 4. **Aspistes** (p. 144). Fig. 6. *Aspistes berolinensis* (= *A. pullus*, ante, p. 145). 6 *a*, antenna.

Family V. SIMULIDÆ.

Genus 1. **Simulium** (p. 146). Fig. 7. *Simulium variegatum*. 7 *a*, front of head of *S. reptans*, male; 7 *b*, ditto of female (Curtis); 7 *c*, antenna of ditto (Curtis); 7 *d*, fore leg of ditto; 7 *e*, ungues, hooked and toothed within.

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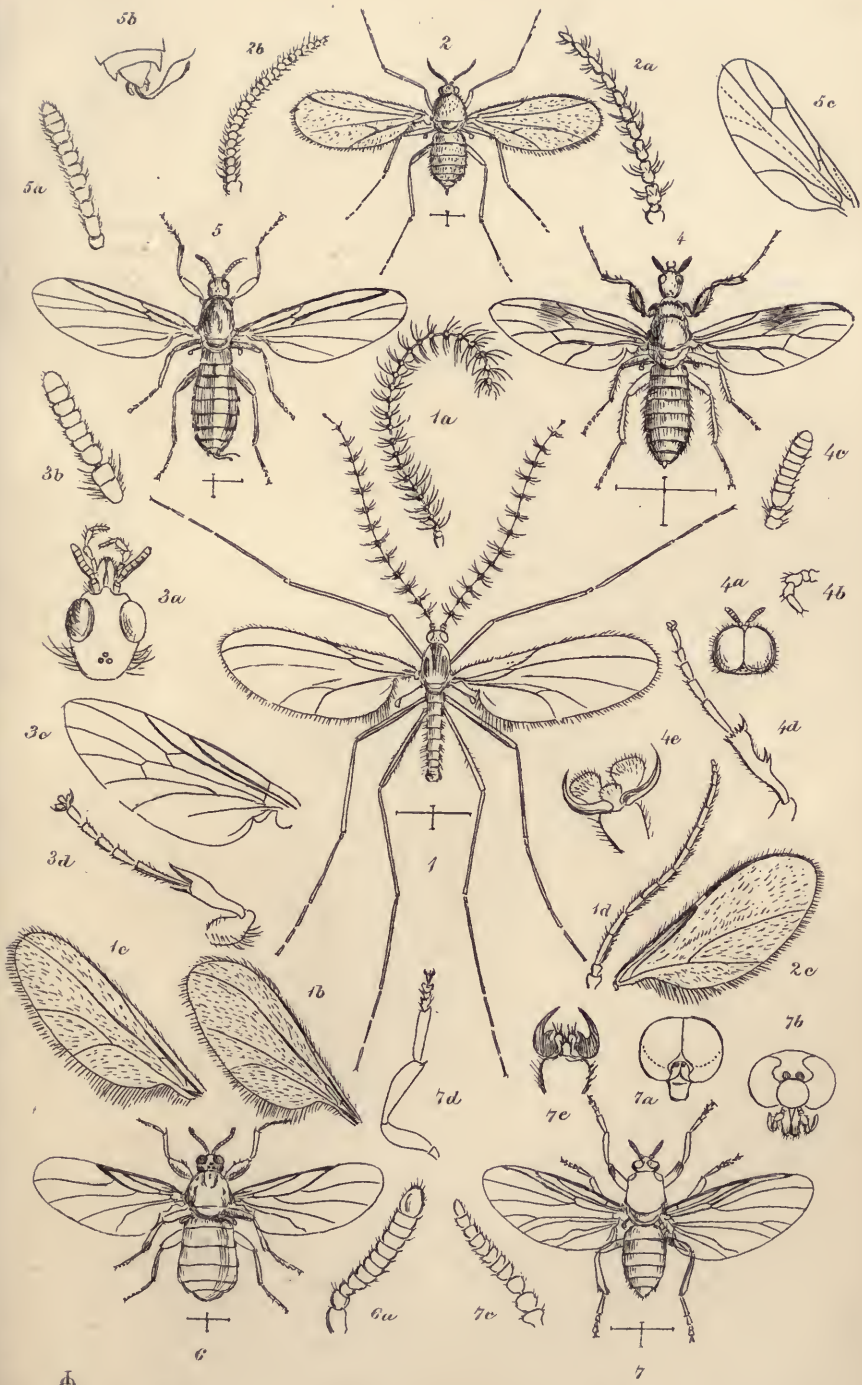

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PLATE XXV.

Family VI. CHIRONOMIDÆ.

Genus 1. **Chironomus** (p. 149). Fig. 1. *Chironomus* (*Diamesa*) *Ammon.* 1 *a*, wing of *C. plumosus;* 1 *b**, antenna of *C. lacustris*, male (Group 3, p. 193); 1 *c**, antenna of *C. tonsus*, male (Group 4, *Diamesa*, p. 193); 1 *d*, antenna of *C. plumosus*, female (Curtis).
(And see Plate XXX. Fig. 4.)

Genus 2. **Tanypus** (p. 196). Fig. 2 *a*, wing of *Tanypus monilis;* 2 *b*, antenna of ditto, female (Curtis).

Genus 3. **Corynoneura** (p. 203). Fig. 3. *Corynoneura atomaria*, male. 3 *a*, antenna of male of *Corynoneura* (Winnertz); 3 *b*, antenna of female of ditto (Wz.).

Genus 4. **Ceratopogon** (p. 205). Fig. 4. *Ceratopogon illustris.* 4 *a**, antenna of *C. brachialis*, male; 4 *b**, antenna of *C. pictus*, male (p. 240); 4 *c**, anal forceps of ditto.
(And see Plate XXIX. Fig. 6, and details.)

Genus 5. **Clunio** (p. 241). Fig. 5*. *Clunio marinus*, male. 5 *a**, same seen sideways; 5 *b**, antenna of ditto; 5 *c**, hind tarsus.

Family VII. CULICIDÆ.

Genus 1. **Aëdes** (p. 242). Fig. 6. *Aëdes cinereus*, male.

Genus 2. **Culex** (p. 243). Fig. 7 *a*, head of *Culex pipiens*, female; 7 *b*, palpus of male of ditto (Curtis); 7 *c*, palpus of female (ditto).
(And see Plate XXX. Fig. 5.)

Genus 3. **Anopheles** (p. 248). Fig. 8 *a*, head of *Anopheles bifurcatus*, male; 8 *b*, palpus of female.

Genus 4. **Corethra** (p. 250). Fig. 9. *Corethra plumicornis*, male. 9 *a*, antenna of female.

Genus 5. **Mochlonyx** (p. 252). Fig. 10 *a**, antenna of *M. velutinus*, male; 10 *b**, wing of ditto; 10 *c*, last joint of hind tarsus.

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DIPTERA. Pl. XXV.

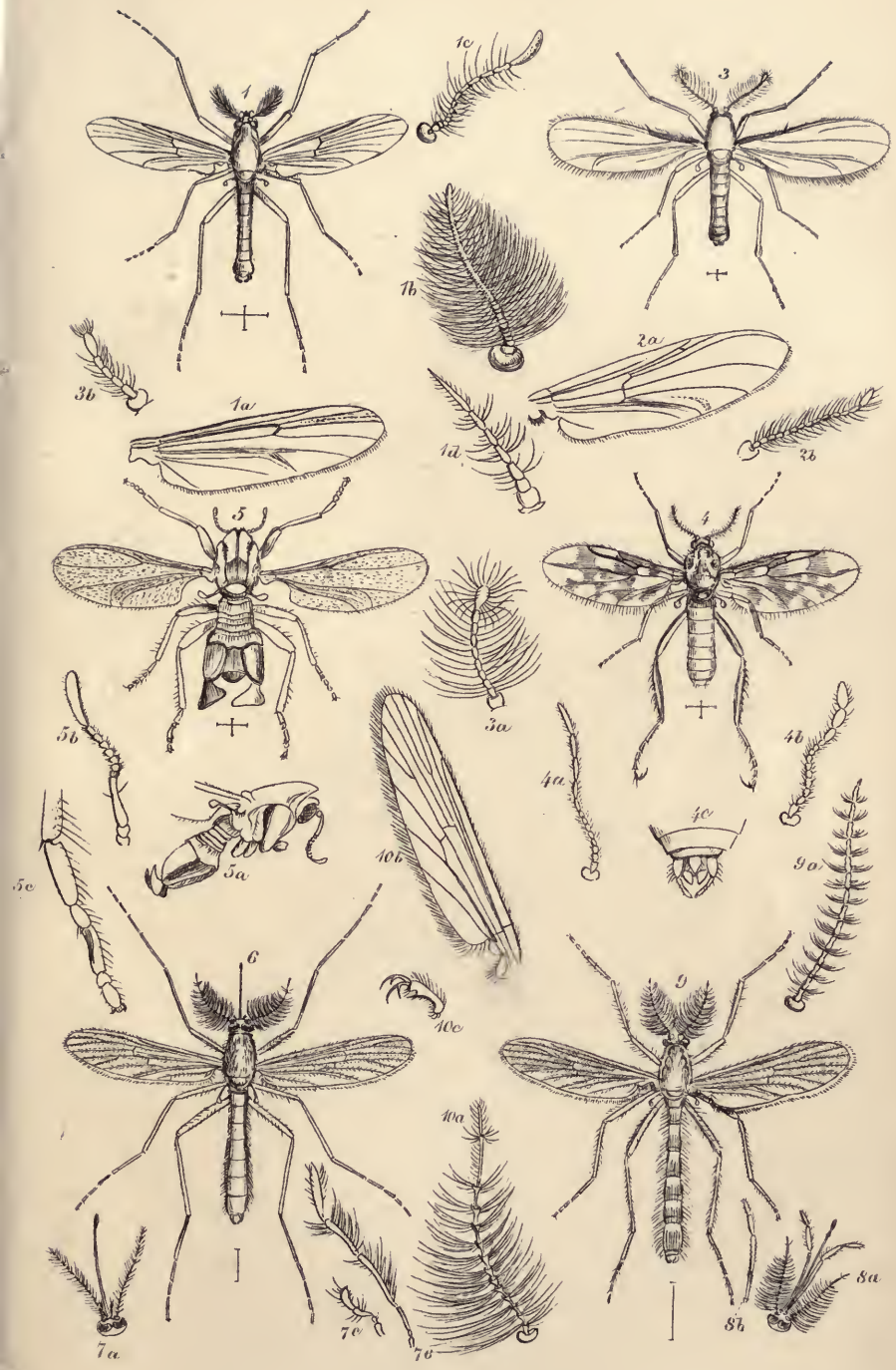

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PLATE XXVI.

Family VIII. PHLEBOTOMIDÆ.

Genus 1. **Psychoda** (p. 254). Fig. 1 *a*, wing of *Psychoda sex-punctata* (Curtis); 1 *b**, head of ditto, seen from below; 1 *c**, apex of proboscis opened by pressure, *m.*, maxilla; 1 *d**, ditto more pressed open, *m.*, maxilla and base of palpus; 1 *e**, maxilla and base of palpus; 1 *f**, labium; 1 *g**, labium; 1 *h**, bivalved oviscapt (the tentacles of the vagina); 1 *i**, one of the joints of the antenna of male and base of another joint.

Genus 2. **Pericoma** (p. 256). Fig. 2 *a*, front of head of a species of this genus (Curtis).

Genus 3. **Ulomyia** (p. 261). Fig. 3 *a*, wing of *Ulomyia hirta*, male; 3 *b*, ditto of female.

Genus 4. **Trichomyia** (p. 261). Fig. 4. *Trichomyia urbica*, male.

Genus 5. **Sycorax** (p. 262). Fig. 5 *a**, wing of *Sycorax silacea*. (And see Plate XXX. Fig. 1.)

Family IX. HETEROCLITÆ.

Genus 1. **Orphnephila** (p. 264). Fig. 6. *Orphnephila testacea*, male. 6 *a**, antenna of ditto; 6 *b**, mouth of ditto.

Genus 2. **Dixa** (p. 266). Fig. 7. *Dixa maculata*. 7 *a*, antenna of ditto (Curtis).

Family X. TIPULIDÆ.

Genus 1. **Trichocera** (p. 270). Fig. 8. *Trichocera hiemalis*, male. 8 *a*, antenna drawn from a living specimen, and certainly 16-jointed.

Genus 2. **Anisomera** (p. 272). Fig. 9. *Anisomera nigra*, male. 9 *a*, antenna of female of ditto (10-jointed); 9 *b*, last joint of all the tarsi, emarginate beneath; (between Figures 9 and 7.)

Genus 3. **Erioptera** (p. 273). Fig. 10 *a*, wing of *Erioptera flavescens* (Curtis); 10 *b*, antenna of ditto (Curtis). (And see Plate XXX. Fig. 9.)

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DIPTERA Pl XXVI.

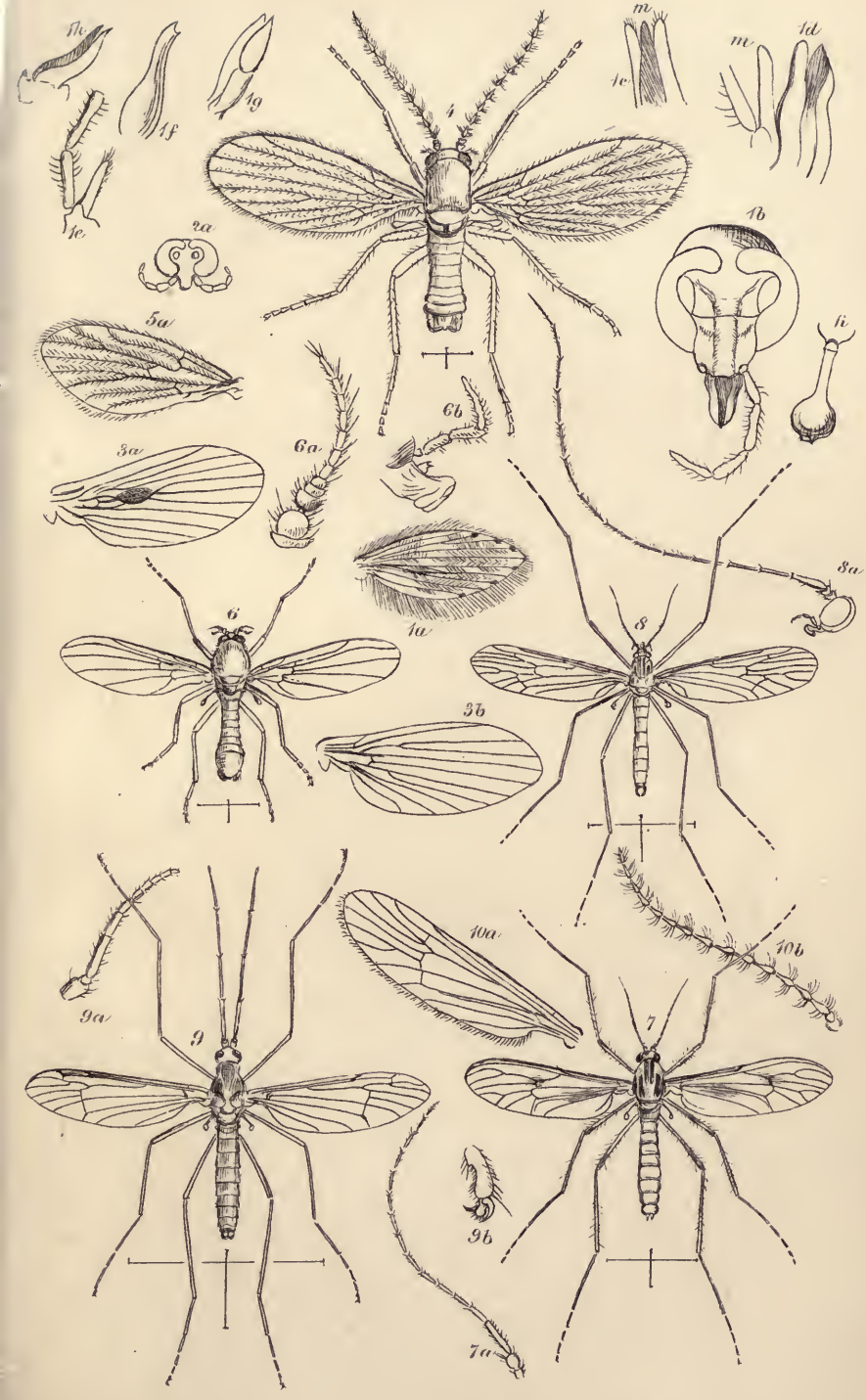

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PLATE XXVII.

FAMILY X. TIPULIDÆ (*continued*).

GENUS 4. **Symplecta** (p. 278). Fig. 1. *Symplecta punctipennis*, male.

GENUS 5. **Limnobia** (p. 280). Fig. 2. *Limnobia* (*Glochina*) *stigmatica*. 2 *a**, oblique side view of labium of ditto, showing the two lateral lobes (mandibles?), and the two minute, central lobes detached; 2 *b**, the palpi; 2 *c**, the labium; 2 *d*, antenna of *L. dispar*; 2 *e*, wing of *L.* (*Tricyphona*) *unicolor*; 2 *f**, wing of *L.* (*Limnophila*) *nemoralis*; 2 *g*, wing of *L. sexguttata*, Dale, Ann. N. H. vol. viii. (not *L. sexmaculata*, Mcq.), (p. 303).

GENUS 6. **Dicranota** (p. 305). Fig. 3. *Dicranota senilis*, female. (And see Plate XXX. Fig. 7.)

GENUS 7. **Ula** (p. 307). Fig. 4. *Ula pilosa*, male.

GENUS 8. **Rhamphidia** (p. 308). Fig. 5. *Rhamphidia longirostris*, female. 5 *a*, head of ditto seen sideways, with the base of the antenna.

GENUS 9. **Geranomyia** (p. 310). Fig. 6 *a*, head of *Geranomyia unicolor*, with one antenna (Curtis); 6 *b*, the horny labrum and tongue; 6 *c*, wing.

GENUS 10. **Rhipidia** (p. 311). Fig. 7 *a*, antenna of *Rhipidia maculata* (Meig.); 7 *b*, wing of ditto (ditto).

GENUS 11. **Cylindrotoma** (p. 312). Fig. 8. *Cylindrotoma glabrata*, male.—See Addenda.

(And see Plate XXVIII. Fig. 1.)

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DIPTERA, Pl. XXVII.

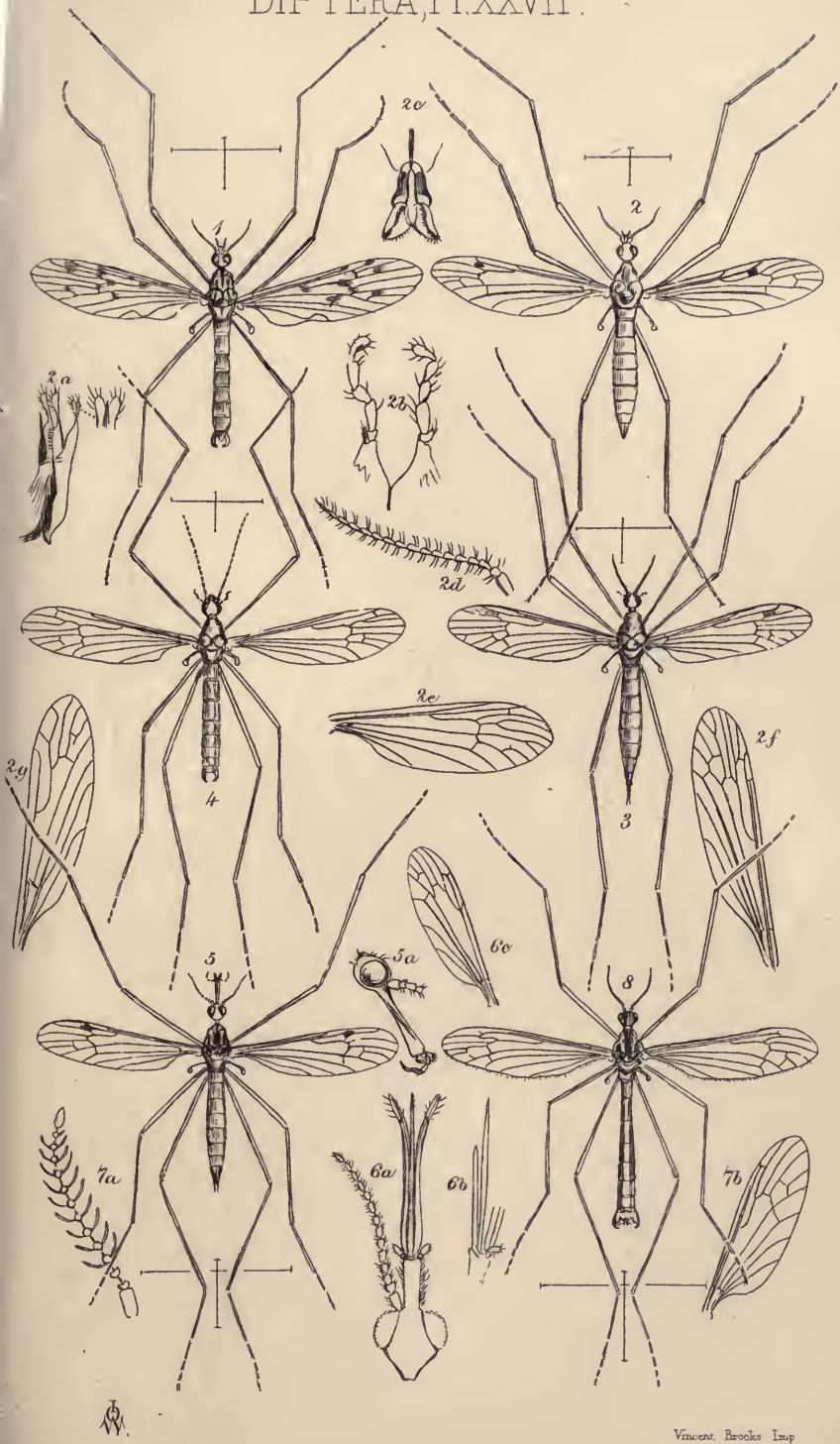

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PLATE XXVIII.

Family X. TIPULIDÆ (*concluded*).

Genus 11. **Cylindrotoma** (p. 312). Fig. 1 *a*, wing of *Cyliudrotoma distinctissima;* 1 *b*, antenna of ditto.
(And see Plate XXVII. Fig. 8.)

Genus 12. **Pedicia** (p. 314). Fig. 2. *Pedicia venosa*, male. 2 *a*, extremity of its wing; 2 *b*, extremity of abdomen of female.
(And see Plate XXX. Fig. 8.)

Genus 13. **Dolichopeza** (p. 315). Fig. 3 *a*, head of *Dolichopeza chirothecata* (*D. sylvicola*, Curtis); 3 *b*, wing of ditto (ditto).

Genus 14. **Nephrotoma** (p. 316). Fig. 4. *Nephrotoma dorsalis*, female. 4 *a*, antenna of male.

Genus 15. **Tipula** (p. 318). Fig. 5. *Tipula pagana*, Meig. (*dispar*, p. 327), female. 5 *a*, fully developed wing of male of ditto; 5 *b*, head of *Tipula gigantea;* 5 *c*, wing of ditto; 5 *d*, terminal joint of tarsi of ditto, obliquely truncate at base, so as to shut upon the opposite oblique tip of the fourth joint, as shown in the following figure; 5 *e*, with the claws folded in; 5 *f*, one of the claws detached; 5 *g*, wing of *Tipula* (*Pachyrhina*) *crocata*.
(And see Plate XXX. Fig. 10.)

Genus 16. **Ctenophora** (p. 333). Fig. 6. *Ctenophora atrata*, male. 6 *a*, antenna of *C. pectinicornis*, male; 6 *b*, one of the middle joints of the antennæ of *C. nigricornis*, male; 6 *c*, one of ditto of *C. bimaculata*, male; 6 *d*, antenna of *C. pectinicornis*, female.

Genus 17. **Ptychoptera** (p. 337). Fig. 7. *Ptychoptera contaminata*, male. 7 *a*, antenna of male of ditto.
(And see Plate XXX. Fig. 6.)

Family XI. RHYPHIDÆ.

Genus 1. **Rhyphus** (p. 340). Fig. 8. *Rhyphus cinctus*, female. 8 *a*, head of male; 8 *b*, antenna; 8 *c*, mouth, with strong, horny labrum and tongue (Curtis).

J. O. W.

DIPTERA Pl. XXVIII.

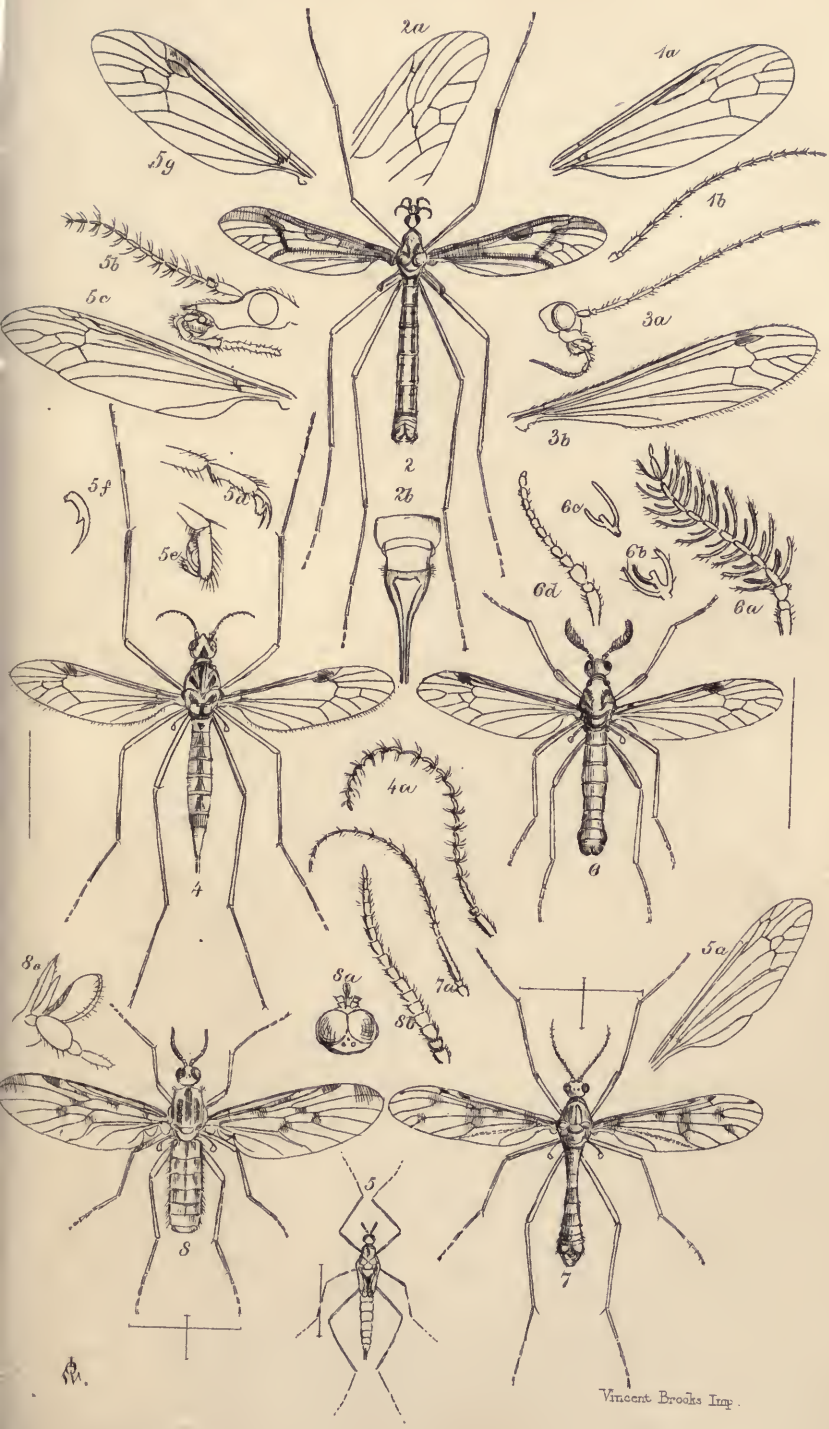

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PLATE XXIX.

FAMILY II. MYCETOPHILIDÆ (*continued*).

GENUS 4. **Leia** (p. 26). Fig. 1. *Leia trimaculata.*
(And see details in Plate XXI. Fig. 5.)

GENUS 6. **Sciophila** (p. 35). Fig. 2. *Sciophila hilaris.*
(And see details in Plate XXI. Fig. 8.)

GENUS 11. **Mycetobia** (p. 49). Fig. 3. *Mycetobia pallipes;* 3 *a*, extremity of hind tibia, showing the minute spurs; 3 *b*, terminal joint of tarsus and ungues.
(And see details in Plate XXII. Fig. 4.)

GENUS 8. **Asindulum** (p. 46). Fig. 4, wing of *Asiudulum flavum.*
(And see figure in Plate XXII. Fig. 1.)

FAMILY IV. BIBIONIDÆ (*continued*).

GENUS 1. **Bibio** (p. 134). Fig. 5. *Bibio Marci,* male.
(And see details in Plate XXIV. Fig. 3.)

FAMILY VI. CHIRONOMIDÆ (*continued*).

GENUS 4. **Ceratopogon** (p. 205). Fig. 6. *Ceratopogou femoratus,* Fab.; Winn.=*C. palustris,* Latreille (Steph. Ill. pl. 42, fig. 3). 6 *a*, antenna of male; 6 *b*, wing; 6 *c*, extremity of hind tarsus; 6 *d*, 6 *e*, 6 *f*, 6 *g*, terminal joint of tarsus and ungues of various sections of *Ceratopogon* (Winnertz).
(And see figure and details in Plate XXV. Fig. 4.)

FAMILY II. MYCETOPHILIDÆ (*continued*).

GENUS 15. **Lestremia** (p. 57). Fig. 7. *Lestremia leucophæa,* male.
(And see details in Plate XXII. Fig. 15.)

FAMILY III. CECIDOMYZIDÆ (*continued*).

GENUS 1. **Cecidomyia** (p. 73). Fig. 8. *Cecidomyia* (*Hormomyia*) *fasciata* (in Mus. A. H. Haliday). 8 *a*, antenna of ditto; 8 *b*, antenna of *Cecidomyia* (*Epidosis*) *gracilis,* male (Winnertz); 8 *c*, extremity of abdomen of *Cecidomyia* (*Diplosis*) *digitata* (Winnertz).
(And see figure and details in Plate XXIV. Fig. 1.)

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DIPTERA, Pl. XXIX.

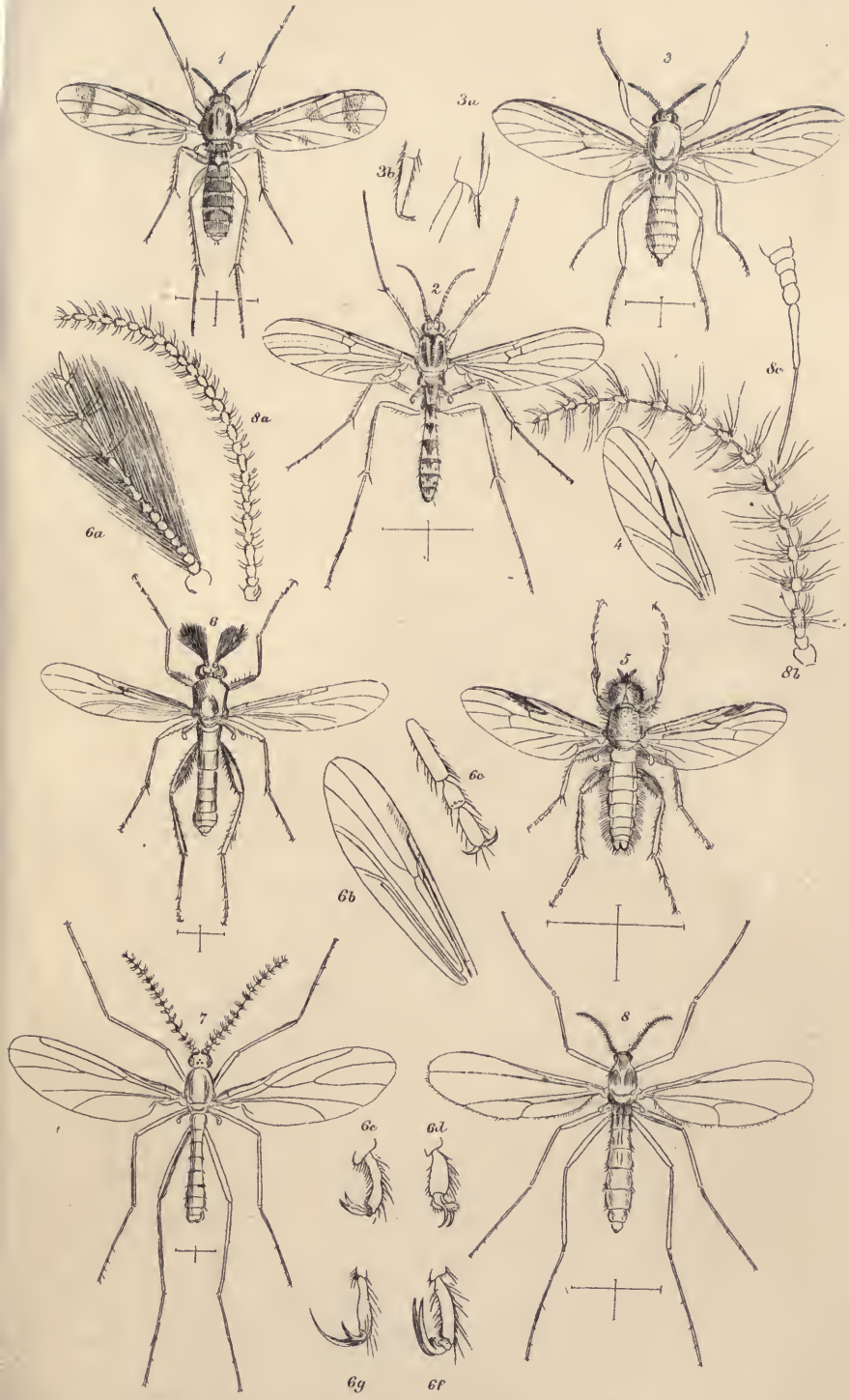

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PLATE XXX.

FAMILY VIII. PHLEBOTOMIDÆ (*continued*).

GENUS 5. **Sycorax** (p. 262). Fig. 1. *Sycorax silacea*,* male.
(And see Plate XXVI. Fig. 5 *a*.)

FAMILY III. CECIDOMYZIDÆ (*continued*).

GENUS 2. **Lasioptera** (p. 132). Fig. 2. *Lasioptera Rubi*, female. 2 *a*, antenna of ditto (Winnertz).
(And see Plate XXIV. Fig. 2, and details.)

FAMILY II. MYCETOPHILIDÆ (*continued*).

GENUS 12. **Sciara** (p. 50). Fig. 3. *Sciara Thomæ*, female.
(And see details in Plate XXII. Fig. 5.)

FAMILY VI. CHIRONOMIDÆ (*continued*).

GENUS 1. **Chironomus** (p. 149). Fig. 4. *Chironomus plumosus*, male.
(And see figure and details in Plate XXV. Fig. 1.)

FAMILY VII. CULICIDÆ (*continued*).

GENUS 1. **Culex** (p. 243). Fig. 5. *Culex annulatus*, male.
(And see Plate XXV. Fig. 7 for details.)

FAMILY X. TIPULIDÆ (*continued*).

GENUS 17. **Ptychoptera** (p. 337). Fig. 6, head of *Ptychoptera contaminata*.
(And see Plate XXVIII. Fig. 7.)

GENUS 6. **Dicranota** (p. 305). Fig. 7 *a*, wing of *Dicranota pavida*;* 7 *b*, ditto of *D. bimaculata*, Schumm. tab. 4, f. 1.
(And see Plate XXVII. Fig. 3.)

GENUS 12. **Pedicia** (p. 314). Fig. 8, extremity of abdomen of *Pedicia venosa*, male.
(And see figure and details in Plate XXVIII. Fig. 2.)

GENUS 3. **Erioptera** (p. 273). Fig. 9. *Erioptera lineata*, male.
(And see details in Plate XXVI. Fig. 10.)

GENUS 15. **Tipula** (p. 318). Fig. 10. *Tipula pagana*, male.
(And see Plate XXVIII. Fig. 5 for figure of female and details of the genus.

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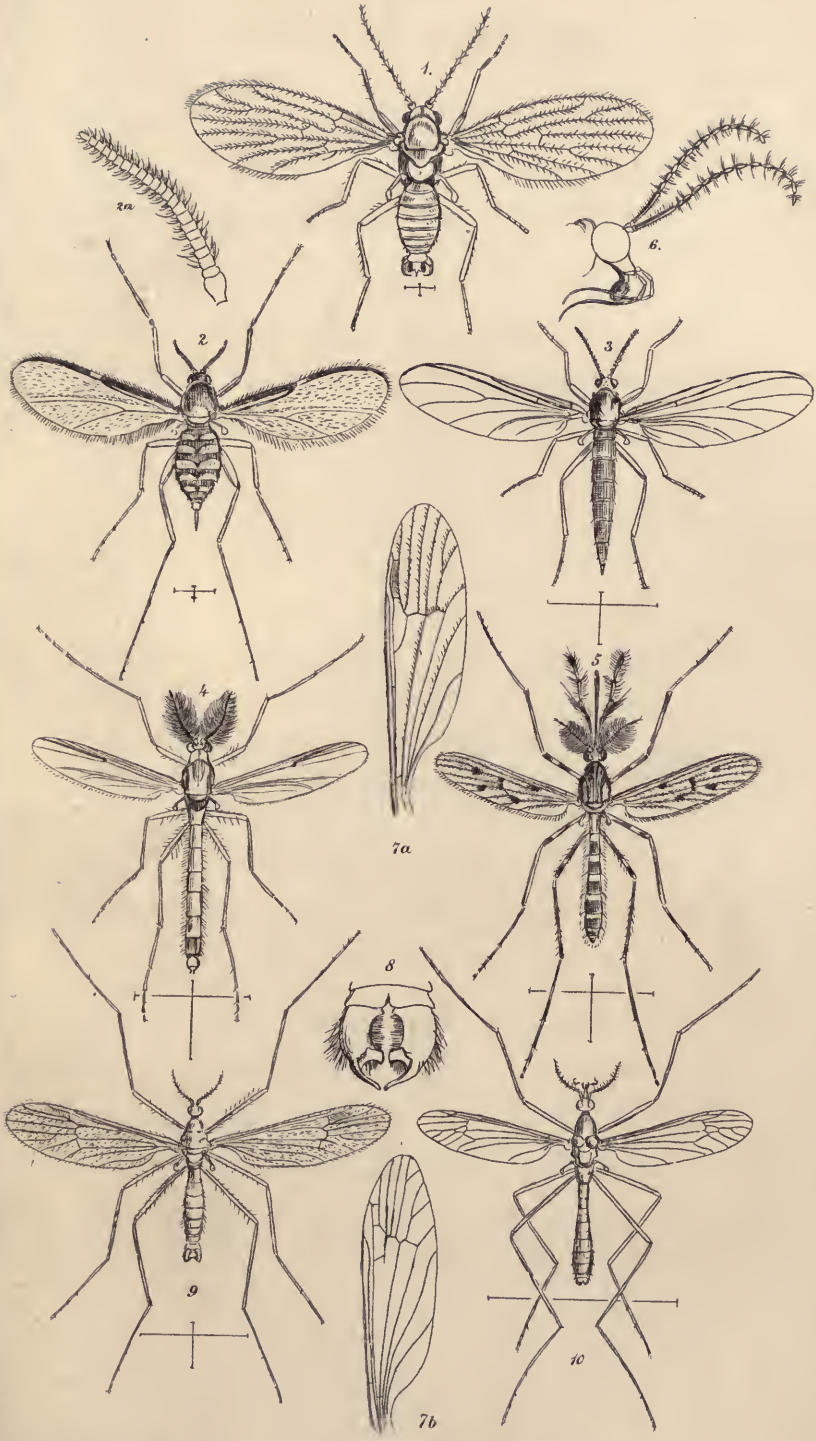
DIPTERA, Pl. XXX.



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